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IMPROVING COMPETENCE IN EDUCATIONAL ADMINISTRATION

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IMPROVING COMPETENCE IN EDUCATIONAL ADMINISTRATION

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EXPLORATION SERIES IN EDUCATION

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Under the Advisory Editorship

of

JOHN GUY FOWLKES

Improving Competence in Educational Administration

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AND

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Dedicated to the Memory of
Everett Ellsworth Lowry—
Artist, Teacher, Friend

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posed primarily of school administrators and professors from eleven southern states, embarked on an ambitious program to improve the professional education of administrators. When the work stalled because of the lack of an adequate description of competence, the Competency Pattern came into being to meet this requirement. It was my pleasure as Director of the Southern States Cooperative Program in Educational Administration to sponsor the work of that group, and to serve with many others in bringing into being a method of patterning competence which has served to guide this effort in one of the most fruitful of the SSCPEA's endeavors.

The authors were among those who contributed much to the work of the SSCPEA group. Their functions were those of creating, designing, and interpreting. In this book they have continued the exercise of these functions to the point that the idea of the Competency Pattern is both broadened and expanded far beyond the original concept.

The Competency Pattern as presented by the authors needs to be viewed in two perspectives. It is first of all a method of patterning competence which may be used by an individual or a group in developing a particular and personal pattern of competence. Second, the authors have, by using the method, developed a pattern of competence for the educational administrator. This pattern is to be viewed by the reader as a demonstration of the method of patterning competence. The basic idea is to invite the reader to use the method in designing his own pattern.

The knack of using the authors' method of creating one's own Competency Pattern will come to the person who sticks a bit with the basic concepts involved. The actual development of one's own Competency Pattern is a much more difficult task, one which in the best sense of the word will never be fully completed, because there will always be new ideas to be integrated into it. The task is one, however, which members of the profession who aspire to leadership can scarcely afford to ignore. Educational Administration can be improved fundamentally only through the thoughtful, intelligent coöperation of all concerned. The Competency Pattern invites each of us to the use of a method which promotes constructive thought without restricting freedom of inquiry.

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INTRODUCTION

The character of this book is distinctive. It represents something new and different in the field of educational administration. It may be properly viewed as an attempt to create an instrument useful to the profession in bringing higher levels of integrity and intellectual quality into the professional preparation of school administrators. It should be considered a high-water mark in the struggle of educational administration to achieve the status of a discipline.

The general nature of the book consists of a theoretical construct or general hypothesis involving an integration of the elements considered essential for competent behavior in the field of educational administration. Is it practical, usable? An eminent professor once remarked, "There is nothing so practical as knowing where you want to go, and this is the function of theory." For the many school administrators and professors of administration who are seeking a new concept of the administrator's job and new ways of approaching the rebuilding of his professional preparation, the following pages may contain a valuable and practical instrument for their immediate use.

The basic idea of the authors had its inception in a nation-wide concern for defining educational administration in terms of the competencies which school administrators should possess. The National Conference of Professors of Educational Administration, the Southern States Work Conference, and many groups in the Cooperative Program in Educational Administration, supported by the W. K. Kellogg Foundation, have given much attention to this matter. It was in one such group in the Southern States Cooperative Program in Educational Administration that the Competency Pattern developed in this book had its origin. This group, com-

EDITOR'S FOREWORD

The importance, complexity, and difficulty of filling the role of superintendent of schools have become increasingly evident. During recent years there has been an increasingly strong and widespread recognition among laymen as well as professional educators of the increasing myriad of assignments which superintendents of schools are expected to accept and execute efficiently and happily. To their honor and credit, the legion of men who fill the post of chief local educational officer in the thousands of communities in our country have evidenced renewed determination to try to improve their qualifications in keeping with the social significance of their posts. The Kellogg Foundation has made it possible for local and county school administrators along with many institutions of higher learning to examine and scrutinize the positions of local and county educational administrators towards a more accurate determination of what these professional trusteeships involve and what manner of men is demanded by them.

The unprecedented examination that has been given to the work of school administrators during recent years has brought from some quarters a note of despair: The "job" of the superintendent of schools is well-nigh an impossible one because of the multitudinous and varied demands that the position makes. Some of the most baffling questions confronting all those concerned with the position are:

1. Is unique and specific "competence" (qualifications) required of superintendents of schools?
2. If there be such a unique competence, does it have its genesis in, and is it largely determined by, the uniqueness of the

characteristics of a given individual? And is it found in only a relatively few men?

3. If there be such a unique competence, to what extent can it be learned (acquired) by a wide sampling of professional educators who enjoy certain basic educational preparation and professional experience?

One of the locations where the spotlight of inquiry has been directed at this question of the presence or absence, nature, and transferability of unique competence of educational administrators, is at the University of Tennessee under the leadership of Dr. Graff. Out of the milieu of the responsibilities and activities of superintendents of schools there has been made a searching investigation towards at least a partial answer to the fundamental questions raised above. The results of this study are herewith presented.

This volume should be of marked help to graduate students who are looking forward to the practice of educational administration and to those who are "on the firing line" as school administrators. It should also prove valuable, challenging, and suggestive not only to those in colleges and universities who are responsible for the formulation and offering of programs of graduate study for persons preparing for administrative positions in local school systems, but also to boards of education, the prospective employers of superintendents of schools.

The authors are substantial and able students of educational administration who have enjoyed many years of varied experience in not only the theory but the practice of their field. It is a pleasure to present this work to all those concerned with the preparation, selection, and work of superintendents of schools.

JOHN GUY FOWLKES

PREFACE

Each era has generally accepted cultural concepts regarding the competent person and how he behaves. "The scholar," "the priest," "the country doctor," "the frontiersman," "the schoolmaster," represent ideas about competent behavior in particular situations and at particular times.

Education, the social institution charged with improving human behavior, is vitally interested in competence. During the past decade this concern for competence has been the central focus for professors of educational administration. The publications of the National Conference of Professors of Educational Administration and the Cooperative Program in Educational Administration highlight in a variety of ways the need for understanding and developing competence. Their concern is based upon the idea that the desired competence must be adequately defined and described before preparation programs can be designed to contribute in its development. The Competency Pattern evolved from efforts to produce an instrument for defining necessary competence in educational administration.

The Competency Pattern is a theoretical construction designed to encompass the elements in intelligent and productive behavior. In the following chapters are presented the ideas involved in this pattern, the logical and factual foundations which support it, and a practical application of the pattern to the work of educational administration and supervision. The pattern serves well in this function and gives promise of furnishing improved behavior guides in many areas of activity. In addition the Competency Pattern may be used as: (1) a coöperative device for use in the analysis of the behavior problems in any area of professional preparation; (2) an individual device for use in ordering personal behavior in the direction of more intelligent living; (3) a differentiating device to use in selecting actions appropriate to a particular purpose and in eliminating noneffective behavior; (4) an integrating device to insure the selection of compatible activities aimed at reaching desired purposes.

Thus, this book, although designed primarily for those persons interested in improving their competence in educational administration, also contains implications for all professional education, for general education directed toward social and civic ends, and for personal living.

The authors are deeply indebted to the numerous persons who have contributed directly or indirectly to this book. Many ideas and much encouragement have come from colleagues at the University of Tennessee and Memphis State College. Special acknowledgment is made to those who served on the staff of the SSCPEA during the five years of its service and to the professors of educational administration, their colleagues from other disciplines, and practicing school administrators from the Southern region who together established the merit of the Competency Pattern by using it as the basic instrument in their continuing drive to revise the professional preparation of educational administrators. Although the authors' great debt to other writers is acknowledged by footnotes throughout the book, grateful appreciation for such invaluable aid is appropriate at this point. For so much assistance received from so many, the authors are truly thankful.

ORIN B. GRAFF
CALVIN M. STREET

July, 1956

PART I

DEVELOPING THE PATTERN OF COMPETENT BEHAVIOR

CHAPTER 1

The Search for Competence

This book is concerned with competence. At the outset, it is to be recognized that "competence" is essentially nothing more than an improved modern term applied to a very ancient human value. From the beginnings of recorded history, and logically even before that time, man has always been interested in the "right" way of doing—the competent way. The right way to perform a job, to rear one's children, to live and work in association and coöperation with others—these are but a few examples. As soon as it is recognized that there are behaviors which represent different levels of excellence, the search for quality (i.e., competent) behavior is given great impetus.

The problem of defining the "competent" life, and of pointing out the behavior patterns appropriate to living the competent life, has occupied some of the best thinkers of every generation. Great civilizations have been built upon the successes of their thinking, and, at a later date, these civilizations have fallen because of errors in their concepts. Unless it is assumed that man has absolutely no control over his destiny, the fact must be accepted that deficiencies in the concept of the "competent life," or lack of an adequate portrayal of the behavior patterns implied therein, were instrumental in the decline and fall of the particular civilization. This, of course, makes the consideration of competence a perpetually pertinent topic, and one which must concern the thinking members of every generation.

In view of the long-standing nature of the problem of competent behavior it would be over-ambitious, even presumptuous, for this book to attempt a final and conclusive solution. In the first place, important problems such as this seem never to admit of final solution. Progress is made toward solution by examining the present state of development, by pointing out flaws in previous constructions, by searching out new or improved knowledges and understandings applicable to the problem, and, finally, by postulating and testing remedial notions. Activities such as these, therefore, constitute the scope of this book as it attempts to contribute to the improvement of the concept of competence and the description of human behaviors consonant with it.

MODERN CONCERN WITH THE PROBLEM OF COMPETENCE

As has been said, "competence" is essentially nothing more than an improved modern term applied to an ancient human value. However, competence is a very important value in our way of living. For this reason, the concern with competence is a powerful one, perhaps because so many people, ourselves included, are observed to act in a manner far short of the possible competence commensurate with present-day knowledge. That is, there is so much available knowledge in the form of accumulated and tested facts, there are so many skills that can be applied, and there is such an abundance of theories and hypotheses that may be used in directing and guiding our actions that it is painful to recognize the lack of intelligence being employed.

Regardless of the particular type of activity, the present interest in competence can list a number of features to reinforce and substantiate the thesis that the majority of individuals are not behaving with the intelligence that is possible in view of the available supply of knowledges, skills, and theories.

First may be mentioned the inconsistency of much modern behavior. In certain fields of endeavor actions are seen to be governed by a particular set of hypotheses, understandings, and theorems. In other areas these theorems and understandings are replaced by other, entirely contradictory, rules. For example, the business world is thought of by many as a primitive jungle. It is every man for himself and bankruptcy take the last one. No quarter is asked or given in the all-out battle for survival. However, in the home, or in other formal or informal social organizations, it is recognized that a man does not have much power when acting alone, but when acting in coöperation with others, to achieve the common good, he can accomplish a great deal. Democratic coöperation is the slogan.

Second, it is seldom realized that human knowledge is a growing, evolving thing. It improves, or can be improved, with time and is refined through further study and experimentation. Yet we have in our society a great deal of what might be termed unreliable or superseded knowledge—knowledge which was true perhaps at one time but which has outlived its usefulness and has become, in fact, untrue. This fact is widely recognized in the area of scientific investigation but is seldom thought of in the realm of everyday behavior. We continue to use much unreliable knowledge in our day-to-day living. For example, at one time it was "known" that the earth was the center of the universe. This knowledge served its purpose and was later replaced by the knowledge that the sun was the center of our system. Despite the improved understanding, the earlier knowledge had become so interwoven into the culture that it was displaced only with great difficulty by the newer, more adequate information. Competence should use the best available knowledge, but there will always be some difficulty in getting free of the older and less valid knowledge while incorporating the new into the pattern of behavior. A further example: although it is known that each human is a unique organism, most educational programs are set up as if each learner were as much like the next as two Fords coming off the assembly line during the same day's operations. A major concern, then, is how to develop a way of behaving which will insure actions based upon the best and most modern knowledge.

A third factor has to do with habits. Habits play an important part in an individual's behavior pattern. Indeed, without habits to take care of much of the routine business of living there would be little time or energy left for the important functions of reflective thinking and problem solving. Habits are efficiency devices which free the human organism from using the higher-level thinking processes on each little routine problem and let the reflective processes be employed in solving more difficult and complicated problems. However, habits, like knowledges, may become outworn, outdated, or even contradictory. A habit which was quite adequate to serve at a particular time in an individual's development may become, because of new understandings, new occupations, or new problems, inadequate. Since habits are conditioned responses, built into the nervous system, so to speak, they do not automatically revise and adjust themselves as the individual comes into possession of new knowledge or new skills. This is a rather critical situation because the old habit will tend to persist and therefore nullify the improved understandings recently accumulated. The only way the old habit can be brought up to date is through intelligent and reflective examination and redirection. Sometimes examination and redirection are forced upon the individual; because of his purposes he must reflect upon the old habit and revise it to meet the newer situation. For instance, when a man trades in his old clutch-and-shift automobile for an automatic transmission model, he must revise his old habit of using the clutch and the shift lever. At first he will notice a decided tendency to try to use the clutch even though the car does not contain one. Each time this happens, however, the matter will be brought to his conscious attention, and through the use of the higher levels of thinking he will redirect his actions accordingly. After a short time the old habit will begin to change so that only occasionally will conscious redirection be necessary. Then after a longer time the old habit will disappear almost entirely and the driver will have incorporated into his make-up new habits which are in agreement with the operation of the newer model car.

The clutch-and-shift habit did not revise itself. The individual had to be directed into the evaluation of the old habit by an important purpose. Thus, unless one recognizes that a habit is not conforming to the desired type of action there will be no reason to evaluate and consciously redirect it. Any consideration of competence must include, therefore, some procedure for occasionally bringing the old habit actions under intelligent scrutiny. They can then be brought up to date or revised so as to make them consonant with the improved behavior pattern. Otherwise the individual may continue to build up habits some of which are entirely inconsistent with others. He may continue to use these same habits, at times side by side, without recognizing the inconsistent nature of his habit patterns.

A fourth concern lies in the realm of assumptions and hypotheses, i.e., those theories and beliefs which guide behavior. It does not require much searching to bring forth the fact that many contradictory assumptions and hypotheses may be working within an individual's pattern of behavior. In one area of his activity he may assume that the scientific method is the only acceptable way of ascertaining truth—particularly if he is engaged in scientific endeavor. In many areas of manufacturing and business, too, the businessman has learned that the scientific method is thoroughly valid. However, in other areas of his life the same individual may use authority as a basis for finding fact. He may judge all of his knowledge in a particular area according to what is favored by the various authorities to which he subscribes. In still other areas of behavior he may govern his actions entirely by what is traditionally acceptable as fact and knowledge, the beliefs and understandings that are "plastered on" by the cultural mores within which he has been reared. To be sure, there is no escaping this "plastering-on" process. One cannot grow up in isolation from any social context. Therefore, a large part of becoming an adult and assuming an adult's position in the social body must be a process of taking on the knowledges, beliefs, and understandings of that society. This is the way the culture perpetuates itself and is passed on from individual to individual, from generation to generation. But the culture would never improve if it were transmitted from one generation to the next in identical condition and just as it was found. There would be no evaluation, no deletion, no addition. Living under these conditions could hardly be called completely competent. Also, it will be generally admitted that the inconsistent behavior which results when knowledge, beliefs, and procedures are eclectically chosen to serve the whim or expediency of the moment is also unworthy to represent the quality of behavior usually inferred by the term *competent.*

The evolutionary speed characteristic of modern knowledge and understanding may be listed as a fifth area of concern. This concern relates slightly to the notion that modern affairs are in a state of crisis and the day of doom is near at hand. But here the resemblance ceases. Each era has had its share of the prophets of immediate doom and it is not our present ambition to join their pessimistic ranks. This discussion prefers to examine the difficulties brought about by the rapid increases, and concomitant improvements, in the available store of human knowledges and understandings.

That knowledge has no real being except in purposeful use is a widely accepted notion. It is also well understood that a new item of knowledge or an improved understanding does not immediately find very much practical application—become integrated into the culture. There is a lag, estimated to range between a decade and a half-century, before a new discovery finds its place in the cultural pattern. In earlier times when life moved at a more leisurely pace this cultural lag was not so critical. Discoveries were infrequently made and the ordinary span of a human life would see few new understandings being added to the cultural collection. There was no increasing gap between the rate of knowledge production and the rate of knowledge integration.

This situation no longer holds; the store of human knowledge is increasing at a fantastic rate. At one time it was thought that the cultural lag in the assimilation of new understandings was due largely to poor means of mass communication. But improved communication media have overcome only a portion of the difficulty. The culture has reached a point where there is a serious difference in the rate of knowledge production and the rate of integration of new knowledge into the cultural pattern.

A lag of this type has two implications. First, it indicates a decided lack of cultural efficiency. Antiquated notions continue in wide use even though improved ideas already exist. Second, varying kinds of understandings among the individuals of the society (brought about by differing rates of knowledge assimilation) create stresses which tend to disrupt the normal functioning of the social group. Coöperation becomes less and less possible and effective until a point is reached where the culture breaks down.

A possible solution to the difficulty may be drawn from a historical consideration of how the problem arose. Previous to the invention of the scientific method the production of knowledge was a thoroughly hit-or-miss affair, and the assimilation of knowledge was a sort of unconscious percolation of ideas from one individual to another. Of course, new knowledges were never very reliable and so were accepted with a great amount of suspicion.

Following the invention of the scientific method the picture changed. To be more accurate, one-half of the picture changed. The production of knowledge became an accurate and "scientific" procedure. The cultural assimilation of that knowledge remained a slow percolation process and lagged farther and farther behind. In the light of current knowledge it is little short of fantastic that the majority of our population still operates on such notions as that (1) knowledge is limited in quantity, (2) all knowledge can be contained by one person, and (3) there are definite limits to production. Thus it may be hypothesized that improved methods must be applied to the use of knowledge. A pattern of competent living will contain elements designed to insure the proper use of the best available knowledge—a scientific method for the use of knowledge.

COMPETENCE DEFINED

The term *competence* needs little clarification. Almost everyone will agree that *competence is a desired quality of job performance.* When the motorist asks for a competent mechanic to make repairs on his automobile, he wants a mechanic who will produce work that is up to a desired, or required, standard. When the school board of a city seeks to employ a competent educational administrator it wants a man who will achieve a certain quality of work in the performance of his duties. Although fairly simple, the above definition is usually quite adequate to describe what is implied by the term *competence.*

At this point let us note some of the implications of our definition. As was said, competence is a *quality.* Now qualities cannot be adequately described or defined in terms of other qualities. They are best considered in terms of element relationships. When thus described they are placed under a rule or law; they are made to take a place in an ongoing pattern of action. Only when behavioral qualities are subsumed under a rule, law, or pattern does any real understanding begin to take place. That is, qualities do not show relatedness; patterns show relatedness, and it is through the "seeing" of relationships that genuine understanding is achieved.

Electricity provides a good example of this notion of understanding-through-showing-relationships versus understanding-through-listing-qualities. Electricity has many qualities—some good, some bad, some useful, and some not so useful. It produces heat, makes light, shocks, flows over wires, operates telephones, moves with the speed of light, operates radios. But this list does not give much understanding regarding the nature of electricity. Neither does it provide much in the way of useful information about how to handle electricity and how to predict its behavior. If instead of listing qualities we describe the behavior of electricity in terms of relationships, we immediately make available better understandings. The simple statement of Ohm's law, which says that "one volt of electrical pressure will force one ampere of current through one ohm of resistance," provides more real understanding of the nature of electrical current than all of the qualities listed above. Similarly, competence has qualities, but listing them may not be the best way to attack the problem of understanding and dealing with difficulties arising within the area of competence.

THE QUALITIES OF COMPETENCE

It is to be expected that anything as important as competent behavior has many qualities. People concerned with the problem of competent behavior have investigated the qualities of competence and listed them, often in a comprehensive and extensive manner. Usually included as the qualities of competence are enthusiasm, fluency, industry, neatness, open-mindedness, originality, coöperation, attractive personal appearance, adaptability, scholarship, and thrift. Examination of this list reveals a number of important factors to be considered. First, many of the items are emotionally colored words to which allegiance is given automatically. Second, these quality items vary in nature. They bespeak attitudes, ideals, knowledges, functions, and abilities. While these are delightful words to which all subscribe, their true meaning remains quite hazy until they are placed in an actual context of behavior, and until the thoughts of the person describing the competence are made clear. Further, lists of qualities, particularly extended ones, tend to confuse rather than clarify the meaning of competence as originally conceived by the list makers.

Thus quality listings neither provide an adequate understanding of competence nor furnish usable descriptions of it. They are no help in teaching us how to recognize competence, how best to describe it, how to gain an understanding of its factors and relationships, and how to set up training programs which will help the learner achieve it.

COMPETENCE AS A PHENOMENON OF RELATIONSHIPS

It begins to appear, therefore, that the required understanding of competent behavior can be gained only by placing it in the context of a rule or pattern. In the past very little has been done with this problem of the patterning of competent behavior. This fact may account for the wide misconceptions concerning the nature of competence which are a part of our present social understandings. Training for competence has always been and still is largely training for traits, abilities, or qualities, although traits, abilities, and qualities carry little meaning until they are placed in an actual job situation context.

There was formerly considerable justification for the idea that competence could be achieved by this type of training. The idea was based on the precepts of a leading psychology of the time—the so-called faculty psychology, which held that learning was achieved by disciplining and developing the various mental faculties. In the light of this psychology it was quite logical to reason that if a person needed the trait quality of memory to be competent, and if his mental equipment included a faculty of memory which could be trained, then the correct thing to do was to train, discipline, and develop his mental faculty of memory. The same line of reasoning could be followed for all the various traits which were desired in the name of personal competence.

Although training for qualities and quality traits may have served quite well and have been quite logical at an earlier date, too many earlier notions have been replaced by improved understandings for any allegiance to remain with the old idea of training for qualities and traits. It is well known at the present time that the mind does not consist of faculties, that learning is not a process of disciplining those faculties, and that if faculties did exist and could be trained they probably could not transfer so as to operate in every situation which arose.

Modern understandings have naturally thrown quite a different light upon the educational process and preparation for competence. Since there is no faculty of reasoning there is no longer any justification for mathematics on the basis that it teaches a person to reason. Since there is no faculty of memory the idea of memorizing a long poem can no longer be justified upon the basis that it exercises and trains the memory. Industrial arts cannot be offered as a wonderful way of training the faculty of the hand and the eye because there is no such entity as a faculty of the hand and the eye.

It is also known that competence does not result from the possession of great quantities of knowledge. That is, possession of knowledge is no guarantee that such knowledge will become functionally operative at the appropriate time. Dependence upon the knowing of a great many facts reflects the influence of another psychology which was quite acceptable at one time—the psychology of mental states.

In addition, modern understanding has shown that man is not entirely a creature of habit. At one time leading psychologists (i.e., the behaviorists) believed that a man's intelligence consisted entirely of his habits and that training a competent person was a matter of training him with the correct habits. And, if the above ideas are not enough to confuse the training situation with regard to achieving competence, it is now well established that no two situations in life are ever the same. That is, each person when confronted with a task or problem situation will find that it is in some ways different from any situation that has heretofore faced him, or for that matter anyone else.

Thus training for competence does not involve training a person's mental faculties so that they will be available to serve him in every appropriate situation which may arise. Training for competence is not filling a person's mind with great quantities of knowledge which may serve him upon any occasion wherein the information is needed. Training for competence is not entirely a matter of giving a person the correct habits, which will automatically cause him to do the right thing in any situation. In a sense, training of habits is the same as the kind of training visualized by those who portray competence by lists of abilities. The "abilities" almost always turn out to be "habit" behaviors and not "thinking" behaviors. Furthermore, it would do violence to the democratic belief to attempt to train learners to be competent simply by training them to give unthinking allegiance to some authority.

The fact that most of the training for competence has been in terms of the above ideas, which modern knowledge shows to be entirely inadequate, reveals the reason for the outstanding present-day concern with competence. Considering the antiquated and outdated methods of training (for competence) it is little wonder that such a small amount of competence has been achieved.

Competence, then, is patterned behavior—a pattern of general action which tends by and large to repeat itself as similar situations arise. Habits are important but do not alone constitute competence; they must be incorporated into the pattern of behavior. Knowledge is important but not until it is integrated into the pattern of behavior and begins to serve a useful purpose. Principles and theories are important but not unless they become an articulate part of the behavior pattern. Methods of procedure, such as the scientific method, are important but not until they become influential in the pattern of behavior. With these things in mind, it is easily seen that training for competence has fallen far short in its efforts because it has been so concerned with one or more of the specific elements of behavior that it has almost lost sight of the larger result to be achieved—the development of patterns of human behavior.

PATTERNS AS A STABLE ELEMENT IN BEHAVIOR

Competence is not so much to be determined by a single and discrete act as it is to be identified in a summation of behavioral incidents. As a person goes about the business of living, working, and playing, his competence (i.e., whether or not his behavior is of suitable quality) is judged by himself and others. This evaluation process is in terms of both the overall degree of performance quality and the discrete and individual performances in specific situations.

Here it is worthy of note that there can be no such thing as competence in the present tense. Real evaluations of behavior are possible only after an act has taken place and its consequences have been revealed. Future estimates of competence can be projected from past behavior, but they remain estimates until actually demonstrated. At first glance this might seem to indicate that competence is a very unstable phenomenon—so unstable, in fact, as to permit little or no effective consideration regarding its nature, its elements, its relationships, or its identification. A more searching analysis of human behavior, however, reveals that there is no real cause for alarm. Human behavior consists of patterns, both habit patterns and patterns in the higher levels of mental activity generally known as reflective thinking or problem solving. Further, behavior patterns are rather stable and change but slowly or gradually. Through them it is possible, by observation and evaluation of past behavior, to determine with an adequate degree of probability the quality of a future performance. For example, observation of a particular educational administrator will reveal that he has a pattern for hiring new teachers. Although the routine will vary somewhat from teacher to teacher, there are enough stable and recurring elements for the procedure to be recognized as a behavior pattern. With a sufficient number of past observations of the use of this particular pattern as a basis, the future use of the pattern in an appropriate situation can be predicted with a high degree of accuracy. Indeed, the pattern of behavior is revealed as one of the most stable things in the entire competence picture. This understanding leads directly to an important assumption, namely, that it is through the picturing of adequate and appropriate behavior patterns that competence (quality behavior) may best be described.

Thus behavior patterns are of extreme importance to the concept of competence. They furnish one of the needed tools for attacking the difficult problem of understanding, describing, and predicting competent behavior. They provide for looking at behavior in its true dynamic and active social context as contrasted to those previously formulated concepts which regarded it as some kind of static entity. They permit the inclusion of the important thinking processes as well as an integration of desirable habit responses, and make it possible to determine the growth potential necessary for current performance to evolve into behavior of a higher quality. Finally, behavior patterns allow us to discard that time-honored, though ineffective, method of describing competence by lists of trait-qualities. This is especially fortunate because insight into the unique organization of human behavior cannot be obtained from lists of descriptive names (qualities).

THE COMPETENCE PROBLEM "NEEDS"

With regard to competence, several areas of needs may be identified. First, there is a need for an adequate and generalized definition of competence. Second, there is a need for adequate descriptions of the more particularized competences which will reflect quality performance in each occupation and for each area of living. Third, competence needs to be understood in terms of a rule or pattern of action. This need is especially critical because competence is a dynamic and growing thing. Static definitions or understandings are not adequate to deal with it. Fourth, in order to achieve the designated, described, and particularized competence, there must be a training program.

At this point it may be noted that the first of the above "needs" has been rather completely satisfied. The general definition which regards competence as "a degree of quality of behavior" seems to be entirely adequate. The second and following needs cannot be so easily satisfied. To describe and place a particular competence within the configuration of a pattern is an infinitely more complex task. From previous discussions, however, it begins to appear that behavior patterns furnish a clue to dealing with this area of the problem. That is, the term *competence* really means *competent human behavior;* competent human behavior is nothing more or less than *quality behavior;* and the quality of behavior is to be found in the *dynamic pattern of performance.* Therefore, we may logically identify competence with a pattern of quality behavior. That is, competence is a quality of behavior, and the quality of behavior is to be found in the pattern of behavior. Naturally, some behavior patterns will be "good" and others will be "bad." It is the task of the description of competence to point out those behavior patterns that are good and those that are bad, and also to show why the quality of such patterns is considered effective or ineffective. Further, it is the task of the description of competence to imply the procedures necessary to achieve the good patterns of behavior.

When considered from the above point of view, the second and third major needs would seem to be successfully attacked through the idea of behavior patterns. That is, in order to particularize performance, the competence will have to be described in terms of a behavior pattern which will produce the required quality of performance needed for a particular job. At the same time, the real meaning of competence can be more readily understood when it is thought of in terms of a behavior pattern. (This, of course, is in direct contrast to the idea that a person achieves competence through developing such traits as memory, scholarship, reasoning. It cannot be too strongly emphasized that this depicting of competence as a pattern is in direct opposition to past beliefs. It is in contrast to the method of listing traits, the method of listing specific abilities, the assumption that competence is the successful completion of a certain number of prescribed courses, and all kinds of atomistic conceptions of competent behavior.)

The consideration of a pattern of behavior involves consideration of the various elements making up the pattern and of the relationships which are necessary between these elements in order for the pattern to function. Such investigation will not only furnish insights into the workings of the pattern but help evaluate the effectiveness of the behavior and the quality of the end product. Thus the quality of performance required of a competent person can be identified, can be understood in terms of elements and their relationships, can be evaluated, and will be intellectualized and verbalized by the individual concerned. There will also be created an adequate description of the particular kind of job performance implied by the designation *competent.*

THE COMPETENCY PATTERN

It has been shown that competence is a quality function arising from an acceptable pattern of human behavior. With this in mind, and also taking cognizance of the need for particularized behavior patterns appropriate to specific jobs, we see the necessity for a specialized kind of pattern description: the *Competency Pattern.* The Competency Pattern is a behavior pattern, but it is not just any behavior pattern; it is designed to reflect the best in intelligent action. To restate: Human behavior tends to group into patterns; some of these patterns are not effective and may be termed poor, but some are highly effective and may be termed competent. It is from a study of these effective patterns that the elements and the relationships for the Competency Pattern are taken.

Since each individual has behavior patterns there is no shortage of patterns to be observed. They are all about and in all degrees of quality. Some are good, some bad; some are intelligent, some unintelligent; some are thinking, some unthinking; some are consistent, some inconsistent. Also, patterns may be observed in the various areas of work, culture, and play. Mathematics has its patterns; so does science; so does the medical profession. Behavior patterns may be seen operating in the realms of religion, education, farming, and all the other areas of human activity.

The task becomes one of searching out and separating the good patterns from those that are ineffective—to:

1. Develop criteria to identify the good or "quality" patterns.
2. Apply these criteria to pick out the desirable patterns.
3. Analyze the desirable patterns for elements and element relationships.
4. Picture the acceptable Competency Pattern by describing the elements and element relationships which are its constituents.

That is, in considering many behavior patterns it should be possible to pick out those which are considered good—evaluated in terms of some acceptable criteria—to locate certain elements of commonness within these patterns, and thus to construct a pattern of behavior reflecting the quality performance which is the whole crux of the problem of competence. The *Competency Pattern* therefore will be a selected and carefully designed blueprint reflecting the kind of behavior deemed best for present-day living. Such a pattern should not only have those elements which are found in the competent performance of an individual's particular job, such as educational administration, medicine, teaching, the law, bookkeeping, farming, and so on. It should also reflect behavior which would be called competent or intelligent, and be appropriate, for use in all areas of living.

Thus, instead of letting individual behavior patterns "just grow," there would be available a tool, and a set of evaluative criteria, which could be used in constructing behavior patterns. Behavior patterns would not then be dependent upon chance for their success. They would be consciously designed in terms of the Competency Pattern.

THE COMPETENCY PATTERN CRITERIA

The need is now apparent for setting up the best that can be envisioned in the way of an ideal pattern of behavior. What are the elements necessary in this ideal pattern? What are the requisite relationships of the elements? What are the criteria by which the pattern is to be evaluated? What is to be its scope, how will it be portrayed, and what service is it to be expected to render?

When the above questions are answered, the result will be the desired ideal pattern of behavior—the Competency Pattern. As was mentioned previously, putting behavior under an ideal rule or law affords much more adequate understandings than are provided by lists of traits or qualities. This ideal pattern will give the desired rule of ideal behavior—the law of quality behavior. It may be extended so as to provide descriptions of quality performance in each area of endeavor.

This law of behavior might be compared to the law of supply and demand. The law of supply and demand is an idealized law and is never found operating in its pure and perfect form. Nevertheless, it is a very important law because it enables clear concepts to be formed regarding the operation of the factors involved in supply and demand. In the same manner, the Competency Pattern will furnish the ideal rule of human behavior and will be a matrix from which other understandings of human behavior may grow. It will provide the idealized situation from which actual and practical applications regarding quality behavior are to be made, and these will be applied in turn to each of the various concerns which are appropriate for competent behavior. To state it another way, the Competency Pattern illustrates what happens when human behavior occurs in its most ideal and perfect state. The individual is then urged to consider what he should do in his own particular area of activity so that *his* behavior will show the kinds of elements, activities, and relationships indicated by the idealized pattern.

It must be pointed out that these references to an ideal pattern of behavior are not intended to imply that the Competency Pattern is a reflection of some new or freshly discovered eternal truth regarding the nature of human behavior. Rather, it represents not an unchanging truth but the best that can be distilled from human experience. It is the best pattern that can at present be visualized to take into account the many factors involved in behavior and, as such, is a kind of working guide for future behavior, and for the building of patterns designed to facilitate improved performance in many areas.

The Competency Pattern will need to conform to certain criteria, some of which it is possible to base on commonly accepted facts; indeed, the pattern will be stronger if *all* the criteria are based upon facts. However, some of the ideas will need much testing before they can be called facts, and others may remain indefinitely as assumptions. For this reason some of the criteria will be in the nature of generally acceptable assumptions. For example, it is *assumed* that competent behavior must be based upon a single social theory; it is a *fact* that all important competences make use of much skill and much knowledge. In the case of the assumption, it perhaps could be proved that a person basing his operations upon a single social theory would be acting in a more nearly competent manner than would a person who is eclectic in his use of theories. However, an attempt at such proof would be a long-drawn-out process. For this reason, and because the assumption is very widely accepted, no effort will be made to substantiate its validity.

Obviously no individual concerned with developing personal or group competence is required to accept the assumptions herein listed. They are the best efforts of the present writers but do not reflect complete agreement with everyone who has ever considered this topic. However, although people concerned with competence are not by any force (other than logic) required to accept these current assumptions, they are under compulsion to develop their own assumptions, which are consistent and which may or may not be in agreement with those used here. For instance, the discussions of this book are based upon the assumption of a democratic framework of social organization. The reader is entirely free to reject this democratic framework. But if he does reject it, he is under compulsion to produce a framework of consistent and comprehensive social theory to replace it.

With these things in mind, we may list some criteria on which to base the Competency Pattern. Our first criterion is *comprehensiveness.* This is in line with the best in scientific tradition, wherein efforts are continually being made to construct rules and understandings which are more and more comprehensive in nature, which will encompass expanding areas of scientific fact; the avowed ambition is to produce one grand comprehensive law which will subsume all facts. Therefore, as a rule of competence, the Competency Pattern should be useful in all areas of endeavor. In addition, it should include all the elements necessary to competence and depict the manner in which these elements are related. To rephrase: The criterion of comprehensiveness means that the pattern must include all the elements and relationships needed to show competence as an organismic entity, and that this idealized entity must be widely applicable in the description of quality job performance.

A second criterion that may be applied to the Competency Pattern is *consistency.* This means, of course, that the Competency Pattern will show unity and lack of conflict among its various elements. The items will be consonant and will not require the resolution of conflicting concepts. Although ideally each item should support and strengthen every other, this is not a requirement; the lack of internal conflict, however, is essential. Therefore, even though an item in the pattern may not support the other items, it must not be inconsistent to the point of contradiction.

The idea of consistency is well understood and widely accepted. Unfortunately the word *consistency* is one of those abstractions which rather easily lend themselves to syllogistic and tautological expressions. Such statements as "To be consistent means to always do the same thing, which means to never change," and "An inconsistent person can be said to be consistent if he is consistently inconsistent" are meaningless and reveal a lack of understanding of the pragmatic notion that the meaning of a word is to be found in its practical application to behavior.

Another erroneous conception is the idea that consistency refers exclusively to closely integrated habit patterns, e.g., "He is a consistently fine marksman" or "That soldier is consistently late for drill period."

In this book consistency refers to a particular characteristic of an action process or procedure. The process involves purposeful activity in goal seeking and problem solving. The consistency characteristic indicates that the process is carried on under the coherence of a set of well-defined principles and makes use of appropriate skills and refined knowledges in suitable relationships to attain action of the highest possible degree of intelligence.

Again we must recognize that the criterion of consistency is based on an assumption; it is not a proved fact that consistent kinds of items form the best behavior patterns. However, consistent behavior is widely accepted as representing a desirable way of living and working. Further, and inversely, it is one of the hypotheses of this writing that the lack of consciously directed consistent behavior is a major contributing cause to the lack of competence displayed by many individuals.

An additional kind of consistency is implied by this criterion: consistency in activities carried on in differing areas of human effort. That is, the type of behavior pattern applicable to the individual's efforts in his business or profession should also form the basis for his behavior in his home and in all of his activities. The criterion of consistency is thus made functional.

The criterion of consistency neither denies the validity of nor supports any particular notion about the nature of competence.

Rather it says that all the items in a specified pattern, and all the patterns developed from the understandings of this basic pattern, should be consistent in terms of both external and integrational constructions. Thus, although an individual need not base his competency pattern upon the assumptions and postulates used in this book, he is under compulsion to develop and apply his own particular beliefs and assumptions to the formation of his ideal pattern of behavior. In doing this he will need to use the criterion of consistency or show the reasons why this commonly accepted axiom is not followed.

A third criterion has to do with the usefulness of the Competency Pattern—its *workability*. Naturally it would not be very practical to develop a Competency Pattern and then find it useless in describing, understanding, or improving the everyday possibilities of more intelligent behavior. It should be obvious that workability will be, at least for some time, a criterion which cannot be fully applied. Workability means the success of the pattern measured by the test of actual usage and evaluated over a considerable period of time. The pattern has not yet received such a complete testing. However, testing is constantly going on in various areas and the results point to a considerable degree of workability. Therefore, at the present time workability can be assayed at least relative to the amount of direction the pattern will provide in identifying the important elements of everyday competence. In another sense workability may be tested—in regard to the ability of the pattern to permit expansion and translation into the specific and particularized descriptions necessary to bring it to the level of practical concerns. To be workable it must be able to do this without losing its basic and idealized unity.

SUMMARY

In this chapter an effort has been made to show that competence is a pertinent modern concern. It has always been a human concern, but in view of modern complicated civilization, and the necessary interdependence and coöperativeness of action, competence becomes increasingly critical. It can no longer be adequately described in terms of traits; descriptions which use qualities (traits) to define other qualities (competence) tend to degenerate into a meaningless play with words. But it can logically be dealt with in terms of patterns of behavior, which can be more adequately understood if there is made available a rule or law of competence. This law of competence is identified with an ideal pattern of behavior—*the Competency Pattern.*

In the light of various assumptions and facts, the *Competency Pattern* needs to satisfy three major criteria: (1) consistency (both internal and external), (2) comprehensiveness, and (3) workability.

The idea of dealing with competence in terms of a pattern of behavior is not entirely new. The following chapter will investigate some efforts made by others along this line and will provide additional ideas and facts to be used in the actual construction of a Competency Pattern.

CHAPTER 2

Competence as a Pattern of Behavior

The previous discussions have furnished valuable clues as to the nature of competence and possible ways of attacking the problem of achieving competent behavior. Many of these clues have indicated that a behavior pattern is one of the important keys to the situation. That is, because of the nature of human behavior, it appears quite likely that some sort of idealized pattern is necessary to provide the understandings that will make possible a direct attack upon the problem of competence. Requirements will be: a description of the kinds of behavior deemed competent (this will include the point of view from which the evaluations are made), identification of the behavioral elements, and the invention of appropriate training experiences and situations. With these things in mind, we shall first investigate some ideas regarding the nature of human behavior and behavior patterns, and survey efforts made by others to describe competence as a pattern of behavior.

THE NATURE OF A BEHAVIOR PATTERN

Because each human action is unique, different in some ways from all preceding and succeeding actions, it is probably impossible to list all the factors in a particular anticipated or desired performance. Different situations call forth too many variants to make any accurate listing possible and in any case it would be largely meaningless because it would not show the important relationships between the various elements included. However, human behavior is too important to be left to pure chance. Training programs, evaluation activities, and program planning all require an effective method for portraying the desired type of behavior, and for identifying such behavior whenever it is in evidence.

Despite the uniqueness of each particular action, observation reveals that individuals tend to act in approximately the same way when confronted with approximately the same situation, that is, in a *pattern of behavior.* Further observation shows that for typical situations in all kinds of activities there are appropriate and socially approved behavior patterns. This applies to simple tasks as well as to many more complicated ones.

At this point it is relevant to inject a discordant note. Behavior patterns are often deeply interwoven into the cultural mores and are absorbed by the individual, or plastered on him, without any intellectualization or logical evaluation and choice on his part. Witness the average individual's "choice" of political party, religion, and the like, and his "stand" on important questions such as states' rights, racial segregation, and so on.

Notwithstanding this criticism of some common behavior patterns and how they are acquired, the fact remains that behavior patterns are very important in the competence picture. For this reason they need to be further observed, analyzed, and, in general, better understood. The following is an example of a common type of pattern. The drivers of two automobiles approaching each other steer to the right side of the road so as to safely pass. In this rather simple situation, their behavior is appropriate and would be deemed competent. This action, therefore, is an illustration of a simple pattern of behavior. With experience and driving practice such action becomes habitual and largely automatic. It is a behavior pattern reduced to the level of habit, and reflection reveals that there are a great many such patterns—walking, dressing, type-writing, greeting friends, and so on. These habit-like behavior patterns are well understood and easily observed. In the doing of some relatively simple task, it is not difficult to identify the pertinent elements of the performance and to design training programs to teach those elements.

However, this discussion is not primarily concerned with simple behavior patterns which are practically stimulus-response habits. The question here mainly involves those larger and more complex behaviors which are appropriate to the job of a professional man such as an educational administrator. The successful performance of this kind of job requires much more than simple habit responses. It calls for higher levels of thinking and the application of problem-solving techniques. Therefore, the prime question concerns whether or not it is possible to use the behavior pattern idea as a means for describing competent job behavior in this more complex job. What sort of behavior pattern will be useful here?

Patterns of behavior have many and varied ramifications and may be observed both as individual patterns and as patterns for group action. In a larger sense the "American way of life" represents the behavior pattern for the people of this nation. It is the *modus operandi,* characterized by constant flux and change and yet containing many stable and consistent elements. As the behavior pattern of a social group it enables the various participating members to achieve an ordered way of living and working together. Another example of the larger type of behavior patterns may be found in what is known as the basic policies of large business organizations. These policies reflect the general operating pattern of the individuals conducting the enterprise. Proposed actions are evaluated and accepted or rejected in terms of the basic behavior patterns.

Regardless, however, of these larger units of behavior, the individual is the basic unit of action, and all the larger behavior patterns are but composite integrations of the individual behaviors of the group's members. The action pattern of the single person is of the greatest importance because as the behavior of the individual members becomes more intelligent and competent so do the larger behaviors of the society.

Thus, the behavior pattern of an individual reflects in general the way he adapts his actions in view of what other people have done or should do. Competent behavior is a measure of the intelligence with which this adapting is accomplished, of how well the individual can identify his role in a situation and then integrate himself, purposefully, into the activity. When the elements of intelligent and quality behavior have been identified, described, and understood, and, further, when these elements have been placed in proper relationships one to another so as to achieve an organismic entity, the resulting behavior pattern description may be properly called *the Competency Pattern.*

COMPETENCE DESCRIBED BY LISTING TRAITS

One of the earliest methods of describing competence was that of listing various traits. As noted in Chapter 1, it was assumed that traits were more or less constant factors and operated equally well regardless of the situation. Probably as a result of faculty psychology, it was assumed that a person could develop these traits and thereafter they would serve him well no matter what the situation. However, modern psychology and the great expansion in available knowledge, skill, and variety of occupations have largely discounted the idea of the possibility of a person's being competent in all things. Furthermore, the various traits appear to be qualities and therefore influenced by purposes, attitudes, and feelings; thus a trait must find its meaning in a context of relationships and may not be thought of as a constant factor at all.

There is a more modern counterpart of this same kind of trait listing: the attempts to describe competent behavior by the listing of abilities. The ability to communicate, the ability to lead others, the ability to use the scientific method, and the ability to do critical thinking are usually found in such a listing. Analytical examination reveals that this is really nothing more than the old trait listing with "the ability to" tacked on. It suffers from the same deficiencies as the earlier trait listing and contributes little or nothing to an improved understanding of competence.

These items add to and strengthen the previously presented evidence that competence needs to be described as a pattern—a constellation of interacting and interdependent factors. These factors will be all the things that influence the person in the performance of his job. They include beliefs, values, skills, attitudes, feelings, understandings, knowledges, methods, and purposes. Obviously, every ability, knowledge, and belief a person may possess is not in full use with every task he is called upon to perform. It is also obvious that all competence elements and relationships are not equally important. Thus we must not only identify elements and relationships but also assign relative degrees of importance.

COMPETENCE AS A CONSTELLATION OF INTERACTING FACTORS

We may conceive of competence as a constellation of factors. "Constellation" is used to describe the phenomenon because, although it is a collection of elements, it has a cohesive unity which allows it to be thought of as an entity. It is made up of elements and relationships between elements, yet the integration is so complete that each element is modified and becomes something different because of its position within the total organismic constellation—competence.

Figure 1 portrays diagrammatically the make-up and relationships of the items in this constellation. The diagram is analogous to the physical scientist's description of the atom, with its particles, energy levels, and interactions and interdependencies. At the center is the nucleus or core of basic beliefs, values, and purposes held by the individual. The core is a very stable element; it can be changed only with difficulty, and such modification is a slow process. As the nucleus of a person's behavior pattern, this core can be thought of as the individual's personality. Since it changes slowly, he may be recognized as the same person from day to day and from year to year. It is true that powerful emotional shocks, such as occur in a religious "conversion," may change this basic nuclear structure, but such radical or rapid changes are the exception rather than the rule.

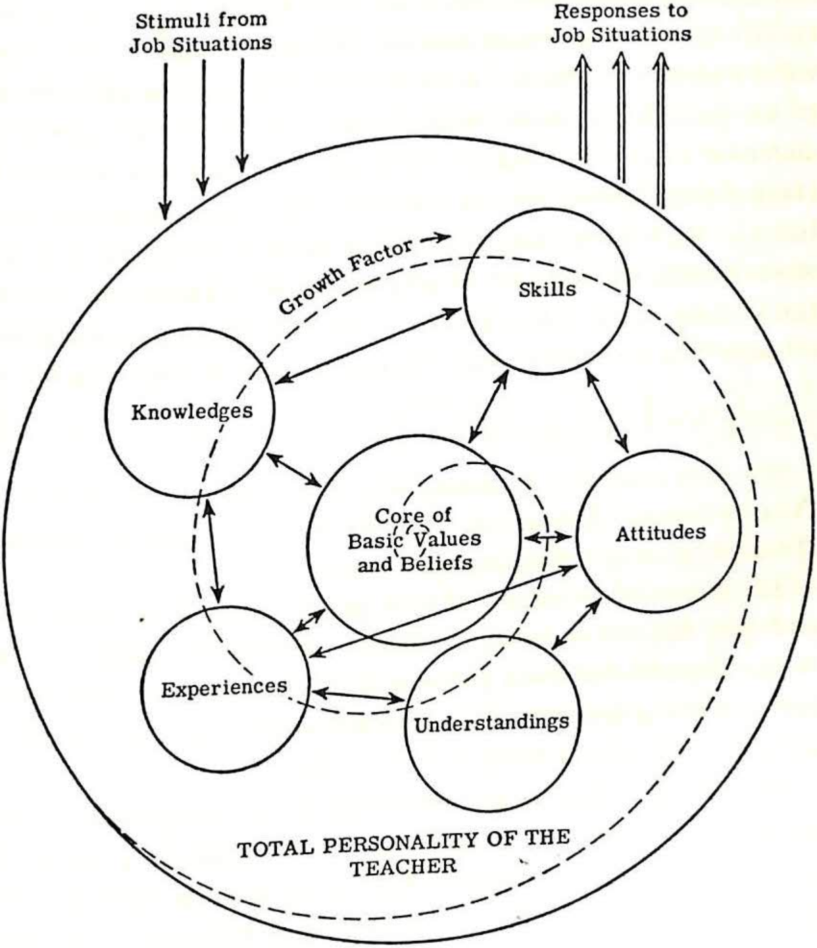
Stimuli from Job Situations
Responses to Job Situations
Growth Factor
Skills
Knowledges
Core of Basic Values and Beliefs
Attitudes
Experiences
Understandings
TOTAL PERSONALITY OF THE TEACHER

FIGURE 1. Competence as a Constellation of Interacting Factors.

Arranged around the nucleus, at various energy levels and in various combinations and interactions, are the other factors involved in competence—or rather, in behavior, since competence is a required quality of behavior and obviously is not always forthcoming, even from the most intelligent individual. These behavior factors include skills, knowledges, methods, understandings, attitudes, tools, and purposes. As the individual goes about the performance of his job, they are constantly combining, interacting, contributing, motivating, directing, restricting, and in various ways and in varying degrees of intensity influencing his behavior. Some tasks require a considerable amount of skill and knowledge, and when these tasks are being performed the skill and knowledge elements will be at high levels of energy. They will furnish the leading components for this phase of competence, although at all times being influenced by the other elements—methods, purposes, tools, beliefs, and the like. Sometimes belief and methods will take the leading roles, with the other factors exerting a secondary influence. These changes, both of combination and of relation, are a continuing process. The growth, both actual and potential, of the individual is portrayed by a spiral which starts at the center and progresses outward. This demonstrates the accumulative nature of the experiences of the organism and is another important factor in the total behavior constellation.

The combined action of all of these elements, when successfully and purposefully applied, results in the quality behavior commonly referred to as competence. While the diagram and accompanying discussion provide additional insights into the nature of competence and are more revealing than a simple statement of desirable traits, as a pattern the diagram has a number of serious drawbacks. Three important characteristics must be exhibited by the acceptable Competency Pattern. First, it must be *comprehensive,* in that it describes all the important elements necessary to competence, and also all the important tasks to be performed in qualitatively fulfilling the job under consideration. Second, it must be *consistent,* in that beliefs, values, methods, and other factors and relationships within the pattern must show a basic and cohesive unity. Also included under consistency is the ability to function successfully, and to picture quality behavior, in a variety of areas of human action. Third, it must be *workable,* in that it will identify the important competence elements and give direction to a program of training designed to insure the inclusion of such elements in the behavior pattern of an individual. As used here, *workable* reflects the pragmatic notion that the worth of an idea is to be found in how well it performs in practical problem solving. Therefore, to be worthy of the name "Competency Pattern" a behavior pattern must aid in understanding the nature of competence and must lend itself to the task of producing competent individuals.

Although an interesting concept, the constellation idea of competence fails to fulfill the above requirements. It does provide some needed insights into the complexity of the relationships, and it suggests the elements included in competent behavior. However, because of the transient nature of its phenomena, and its lack of stability, it becomes unworkable. That is, it may give a general idea of what is meant by competent behavior but it cannot be applied to the practical task of improving a specific job performance.

SOME PUBLISHED EFFORTS TO PATTERN ELEMENTS OF COMPETENCE

A review of educational literature reveals that little has been done toward constructing a workable competency pattern. Many writers have listed desirable traits. Some of these lists have been divided into categories depicting the different areas of competence, but they fail to show functional relationships and the behavior patterns of the competent individual.

Four noteworthy exceptions may be listed, however, which do try to organize the elements of competence into patterns. These are: (1) *Richards' formula,*[1] as originally proposed by Charles R. Richards and later expanded and developed by other leaders in the field of industrial vocational education; (2) the Critical Incident Technique;[2] (3) SSCPEA, *Tentative Progress Report on Planning for the Study of Preparation Programs in Educational Administration;*[3] and (4) the Job-Analysis Technique.[4] The following discussion will consider each of these concepts, point out their strengths and weaknesses, and prepare for the development of a competency pattern which will fulfill the desired criteria of *comprehensiveness, consistency,* and *workability.*

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[1] As described by John A. McCarthy, *Vocational Education: America's Greatest Resource* (Chicago: American Technical Society, 1951), pp. 199–208.

RICHARDS' FORMULA FOR JOB SUCCESS

Richards and Charles R. Allen were concerned about the qualities which the individual needed for job success (competence). They recognized that success did not depend upon the single element of skill and decided to study jobs at the Brighton Mills, Passaic, New Jersey, to find out what additional qualities are essential for job competence, and to design a training program to produce competent workers.

From the results of this study they concluded that competence needed for job success varied according to the extent of the individual's skills, technical knowledge, and general vocational knowledge. The formula was first expressed in the following terms:

$$E \propto M + T + GV$$

$E =$ Personal equipment needed by the individual for job competence.

$M =$ Manipulations of hands, machines, or tools, or combinations of each.

$T =$ The technical knowledge needed to make M functional.

$GV =$ General knowledge of the occupation or field. This includes

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[2] As developed by John C. Flanagan, "The Critical Incident Technique" (Pittsburgh: American Institute for Research and the University of Pittsburgh, 1953) (mimeographed).

[3] Southern States Cooperative Program in Educational Administration, *Tentative Progress Report on Planning for the Study of Preparation Programs in Educational Administration* (Nashville: SSCPEA, 1952).

[4] Verne C. Fryklund, *Trade and Job Analysis* (Milwaukee: Bruce Publishing Company, 1947).

> knowledge of materials, processes, safety, and other items which contribute to make an intelligent workman.[5]

The Richards formulas are pseudo-mathematical formulas in that they do not express the exact relationships required of a true mathematical expression. Rather, they are inventions designed to seek out and place in perspective the qualitative factors which constitute the personal equipment needed for job competence and occupational success. As was pointed out in the discussion of competence as an interacting constellation of factors, the behavioral influence of each factor is constantly fluctuating and operating with varying degrees of intensity. Under such conditions it is impossible to devise a quantitative formula as is required in mathematics. Nevertheless, the formulas are useful as a pattern or outline to discover the elements necessary for job success, and it was for this purpose that they were devised.

After some years of use in its original form, Richards' formula, through the work of Charles R. Allen and his associates in the United States Office of Education, was revised to enlarge the scope of the terms and the scope of the formula. The present form generally accepted is as follows:

$$E \propto M + T + I + J + Mo$$

E = Personal equipment needed by the individual for job competence.
M = Manipulations of hands, machines, or tools, or combinations of each.
T = The technical knowledge needed to make M functional.
I = General industrial knowledge of safety materials, hygiene, and other items which contribute to make an intelligent workman.
J = Judgment.
Mo = Morale.

The formula reads as follows. The personal equipment which an individual needs for job success varies as his possession of skills, technical knowledge, occupational information, judgment, and morale.[6]

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[5] McCarthy, *op. cit.*, p. 201.

The terms *M, T,* and *I* were factors in the original formula and they are largely self-explanatory. However, two additional terms have been added which may require further discussion. The *J* factor represents judgment, which, McCarthy states, ". . . usually consists of an aging process through the exercise of skills and related knowledge. . . . It involves practice and its development often depends upon repetition to the stage of conditioned responses."[7]

It has been the experience of these writers that judgment, however, is not composed of habits developed from skills and related knowledge. It is more accurately described as the ability to do reflective thinking—to evaluate a problem situation, see alternate courses of action or methods of attack, and estimate probable results to be obtained when and if the courses of action are put into effect. Judgment is developed through the use of reflective thinking in many similar situations and in observing and evaluating the reliability of the various hypotheses which have been used. It is the product of experience but reflects the use to which the experience is put rather than the accumulated sum of unevaluated experience.

The *Mo* term needs some explanation also. It represents the *morale* of the worker. Persistence, job pride, punctuality, loyalty, coöperativeness, spirit, and dependability are frequently listed as component parts of the factor *morale.*[8] All these items have volatile qualities because they may be present to a positive degree and may seem to be stable and permanent; yet they may be weakened or evaporate entirely owing to pressures such as unfair treatment, poor administration, home and family difficulties, or financial worries. Because of its volatile nature, morale is a factor that needs constant attention. The other factors, M, T, I, and J, do not dissipate rapidly, and once developed they may be quickly regained whenever the need arises.

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[6] *Ibid.,* p. 202.

[7] *Ibid.,* p. 203.

[8] *Ibid.*

As seen from the viewpoint of the organismic psychology, morale is the "tone" of the individual and is a direct indication of his success in achieving purposes and meeting his needs.

Participation in the larger community and civic groups reflects the need to participate and contribute to the success of these groups and to develop effective relationships with and within such a social framework.

From the economic standpoint, the individual has need for assurance that he is able and that he is improving his ability to take an active part in the work of his society. He needs to feel that there is a place for him in the economic organization, and that he is making progress in finding and filling that place.

Information has not been assembled to indicate the degree of fulfillment of needs necessary to achieve high morale. High morale can be maintained under difficult and dangerous physical and mental conditions. However, it is logical to assume that there is a level of need fulfillment necessary for morale to be maintained by an individual. If certain needs are not being met to any appreciable degree, other needs must be rather completely satisfied if the level required for morale is to be maintained.

During the blitz of London the morale of the populace continued at an acceptable level, and despite expectations the incidence of mental breakdown showed no marked increase. It is believed that the physical danger and mental pressure caused by the bombings were offset by the increased group participation and the individual's ability to identify himself with the group and its purposes, dangers, and problems.

From this discussion it is seen that morale is interwoven into the structure of individual needs and purposes. Without morale the factors of competence become largely inoperative. Thus, in Richards' formula for job success, "morale of the worker is considered of greater importance than skill, knowledge, or judgment."[9]

An interesting development in the use of Richards' formula appears in the custom of letting the size and shape of the written characters change to express the nature and extent of that item necessary for competence in a specific job area. For example, to express the competences needed by a teacher of electrical theory the formula would be written:

$$\mathrm{E} \propto \mathrm{M} + \mathrm{T} + \mathrm{I} + \mathrm{J} + \mathrm{Mo}$$

Notice that the *M* is small to indicate a limited need for manipulative skills, while *T* and *I* are tall and broad to indicate their major importance in this type of job. In other types of jobs the symbols would again vary, with the height of the symbol representing the intensity or concentration and the width showing whether the ability is narrow or broad in scope. For example, to represent a highly developed single-purpose job in a manufacturing process, the *M* would be tall and narrow to indicate a highly developed skill but one that functioned through a narrow range of operating procedures. To represent the manipulative skill needed by an industrial arts general-shop teacher the *M* would be broad but not tall. This would indicate that the teacher needed a wide range of manipulative skills, but that such skills did not need to be highly developed.

Recognizing the complex social problems of modern American democracy, McCarthy has proposed expanding the formula. The expanded version would contain two additional terms and appear in this form:

$$\mathrm{E} \propto \mathrm{M} + \mathrm{T} + \mathrm{I} + \mathrm{J} + \mathrm{Mo} + (\mathrm{PAD}) + (\mathrm{POD})$$ [10]

(PAD) is the short method of expressing *Problems of American Democracy* and involves those social understandings which have a relationship to effective civic performance. It is an important part of the competency pattern of any individual—a part of the equipment needed for effective living in a democratic society.

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[9] *Ibid.*, p. 205.

[10] *Ibid.*, p. 207.

Problems of Occupational Democracy, or (POD), is proposed to include those understandings which relate to the rights and responsibilities accruing to the individual because of his job or position. (POD) is in many respects similar to (PAD), but (PAD) is the more inclusive term and refers to that larger area of democratic coöperation commonly indicated by the phrase "effective participation as a citizen." (POD) refers to the use of democratic relationships in the particular field of work wherein the individual earns his livelihood. These terms reflect a belief in democracy as a way of life that is to be followed with consistency in all human relationships. This is in contrast to the narrow concept which holds democracy to be simply another scheme of government.

From this discussion it may be recognized that the Richards' formula concept of a pattern of job competence is composed of three major phases or facets: (1) those skills, knowledges, and understandings necessary to the successful performance of the tasks which compose the job; (2) those understandings and attitudes necessary for democratic coöperation with other members of the job team; (3) those understandings necessary for effective participation as a member of a democratic society.

This consideration of Richards' formula has been in the nature of an informational presentation. Discussion of its strengths and weaknesses, and the extent to which it fulfills the criteria of *comprehensiveness, consistency,* and *workability,* will be presented in a comparative manner and is to be reserved until after information is given regarding other concepts of competence.

THE CRITICAL INCIDENT TECHNIQUE

During the stresses of World War II, and the consequent need for effective utilization of man power, the critical incident technique for determining and evaluating job competence came into being. Because of the press of time, older and more cumbersome methods of job placement could not be employed. Thorough job analysis and exhaustive testing of applicant abilities were out of phase with the tempo of the war effort. The critical incident technique was devised as a faster, simpler, yet no less effective way of getting the right person into the right job, and of evaluating the effectiveness of his on-the-job performance.

The technique is based upon several important assumptions:

1. That the job must be defined in terms of the important behavior requirements necessary to its satisfactory performance.
2. That, in terms of competence, ability cannot exist independent of observable behavior.
3. That observations of worker behavior, or the results of such behavior, constitute the only source of evaluative data.

"It is believed that the determination of critical requirements in terms of behavior is a necessary condition to an adequate definition of the job in terms of behavior. Such a definition of the job must include the identification of the aspects of behavior to be included, standards of satisfactory performance for these, and estimates of their relative importance." [11]

It is observed that *behavior* is the key item in this plan. Job requirements are stated in terms of desired worker behavior, worker competence is judged upon observed behavior, and aptitude, training, information, attitudes, habits, skills, and abilities have no meaning independent of behavior.

As indicated by its name, this technique makes use of selected, important, or "critical" incidents of behavior, incidents that have an important bearing upon the success or failure of the work. In general, a critical incident may be defined as "one which causes a judgment to be made by an informed observer."[12] Thus, use is made of extremes of behavior, which are easier to observe and report. It is believed that all jobs have critical and noncritical elements. This procedure makes use of the critical items and excludes the routine or noncritical ones.

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[11] John C. Flanagan, "Problems and Procedures in Obtaining Critical Requirements from Critical Incidents" (based on paper read at joint meeting sponsored by Psychometric Society and Division of Evaluation and Measurement of American Psychological Association at Denver, September 1949), p. 2.

Five criteria are employed in gathering evaluative data:

1. The data must be from actual observation of worker behavior or the results of that behavior.
2. The aims and objectives must be known to the observer.
3. Judgments made by the observer are clearly defined.
4. The observer is qualified, i.e., knows effective behavior when it appears.
5. Reporting is immediate and accurate.[13]

An application of this technique to education has been reported by the NESDEC.[14] This study attempted to establish patterns of competence through observing the teacher at work and listing specific behavior items which were considered effective or ineffective. These behavior items were teacher reactions to teaching situations which arose in the classroom, and the judgment *effective* or *ineffective* was applied after considering the context of the situation which brought about the particular item of teacher behavior.

The following listings are representative of the findings reported by this committee:

Effective teacher behavior

1. Encourages every child to participate.
2. Encourages learning by doing.
3. Shows respect for children's feelings.
4. Watches for symptoms of maladjustment.
5. And so on.

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[12] *Ibid.*, p. 4.

[13] *Ibid.*, p. 5.

[14] New England School Development Council, *Report of an Exploratory Study of Teacher Competency* (Cambridge: NESDEC, 1950).

Ineffective teacher behavior

1. Orders children to obey.
2. Does all planning alone.
3. Becomes vindictive.
4. Withholds credit from children.
5. Lectures.
6. And so on.[15]

THE SSCPEA COMPETENCY PATTERN

One of the more comprehensive competency patterns is to be found in an instrument developed by members of the Southern States Cooperative Program in Educational Administration. The SSCPEA began its work in 1951. This group assembled to make plans for a study of preparation programs in educational administration in various coöperating institutions in the southern area. Their primary concern centered around attempts to reach preliminary common agreements on the competences needed by educational administrators and on specific ways and means of achieving these competences.

Having reached agreement that, logically, needed competences must be stated in terms of the job, and inversely that a comprehensive list of such competences would in effect portray that job, the conferees set out to list the competences needed by the educational administrator.

The competency statements, which were reviewed by groups and individuals involved in the development of the study plan, were found to be fine expressions of what administrators could be and what they might do. Those statements were expressed as ideals, functions, methods, jobs, understandings, attitudes, and techniques or tools which the administrator should have at his command. Sometimes these statements of competencies were compiled in long lists; sometimes the lists were subdivided and the various kinds of competencies arranged in subgroups. In no case, however, was it found that these competencies were arranged to show a structural relationship each with the other.[16]

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[15] *Ibid.*, p. 34.

The statements were fine expressions but did not lend themselves to the formation of a plan for their development in individuals preparing for jobs in educational administration. Before proceeding with the task of planning for the improvement of preparation programs in educational administration, the committee found it necessary to find *usable* ways of stating those competences deemed necessary for successful job performance by the educational administrator. Lists of competences had been prepared, but there the work bogged down because of the lack of a plan or pattern which would show relationships and give meaning to the stated competences.

It was as though all of the ideas necessary for the development of a building plan had been assembled together, but no architect had placed them together in a building design. It was this pattern or building design which had to be created before the competencies could be used in the development of programs for the preparation of educational administrators.[17]

Proceeding on the assumption that the competences necessary for job performance must logically derive from the job itself, the committee began the work of analyzing and characterizing the job of the educational administrator. In order to achieve the requisite degree of specificity and yet not become lost in a maze of minutiae, the committee decided to portray the job in terms of "critical tasks," selected on the basis of the criterion "Are they of critical importance to the successful performance of the job of educational administration?"

This method of attack showed promise, and work was started to determine the "know-how" needed for the performance of the critical tasks. The term "know-how" is used to indicate those understandings, skills, tools, and attitudes essential to the performance of the particular task under discussion. For example, research is an important tool, and the performance of certain of the critical tasks requires adeptness in its use. As the work on know-how progressed, an important difficulty arose. There are many understandings, attitudes, and knowledges which are incompatible and in some instances diametrically opposed—for example, the following understandings regarding the inherent nature of human morality:

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[16] Southern States Cooperative Program in Educational Administration, *op. cit.*, p. iii.

[17] *Ibid.*, p. iv.

1. Man is born immoral, and must be made moral.
2. Man is born moral, and must be protected from the evil influences of society so that his inherent morality may develop.
3. Man is born amoral, and achieves morality through learning to act within the structure of customs and mores of his society.

Each of these items is incompatible with the others. The pattern needs an element which insures consistency and compatibility; otherwise it becomes unworkable. This needed element is found in the basic theory underlying the job of the educational administrator and brings to light two important assumptions regarding a competency pattern.

First, it is assumed that a competency pattern which is usable can have but a single theory. It is further assumed that there is no theory of educational administration independent of the cultural climate in which it operates. Acting on the basis of these assumptions, a democratic theory of educational administration is presented, its functions involving directly the management of public education in such manner and ways as to foster and promote the ideals of American democracy.[18]

The "critical tasks" which compose the job, and the "know-how" items necessary to the performance of the job, are assayed in terms of the basic theory underlying the concept of the function of educational administration. This exercise insures harmony, or at least lack of conflict, between the various elements of the competency pattern.

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[18] *Ibid.,* p. 9.

Thus the SSCPEA competency pattern integrates three important elements into its plan for describing and investigating competence: (1) competence reflected in job analysis to reveal the "critical tasks" involved; (2) the "know-how" or equipment needed to perform the critical tasks; (3) "theory" to furnish guidelines and framework, and to insure consistency.

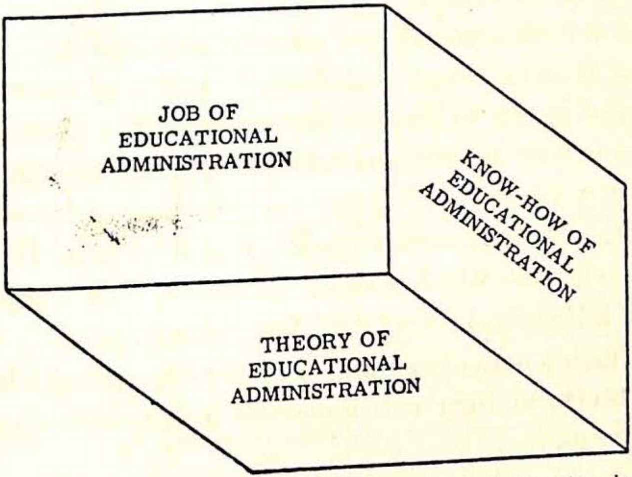
JOB OF EDUCATIONAL ADMINISTRATION
KNOW-HOW OF EDUCATIONAL ADMINISTRATION
THEORY OF EDUCATIONAL ADMINISTRATION

FIGURE 2. The Job of Educational Administration in Relation to Its Theory and Know-How. *Source:* Southern States Cooperative Program in Educational Administration, *Tentative Progress Report on Planning for the Study of Preparation Programs in Educational Administration* (Nashville: SSCPEA, 1952), p. 6.

Figure 2 shows these three essential elements of the competency pattern in appropriate interrelationships. The job is central, and evaluation of competence is in terms of job performance. Theory is portrayed as the base of the pattern and is considered essential since all performance is, consciously or unconsciously, carried on in terms of some theory. Remembering the assumption that "a workable competency pattern can have but a single theory," we recognize that theory provides the guideposts and evaluative criteria needed to insure consistency and logic throughout the pattern. The job tasks and the necessary know-how must not contradict the basic theory. As seen in Figure 2 the job comprises the body of the pattern. It is composed of the things to be done and is supported by and reflected in the know-how essential to their doing.

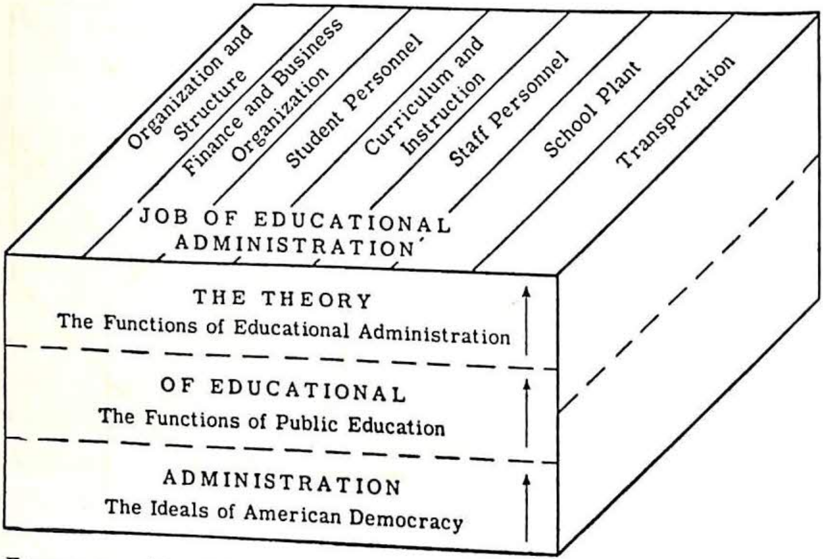
Organization and Structure
Finance and Business Organization
Student Personnel
Curriculum and Instruction
Staff Personnel
School Plant
Transportation
JOB OF EDUCATIONAL ADMINISTRATION
THE THEORY
The Functions of Educational Administration
OF EDUCATIONAL
The Functions of Public Education
ADMINISTRATION
The Ideals of American Democracy

FIGURE 3. The Job of Educational Administration in Relation to Its Theory. *Source:* Southern States Cooperative Program in Educational Administration, *Tentative Progress Report on Planning for the Study of Preparation Programs in Educational Administration* (Nashville: SSCPEA, 1952), p. 7.

Figures 3 and 4 show an expansion of the *theory* and *know-how* concepts as they relate directly to the job of educational administration.

Starting with the theory of Educational Administration as presented in Figure 3, three subdivisions are offered which form a progression toward the Job of Educational Administration; i.e., The Ideals of American Democracy, The Functions of Public Education, and The Functions of Educational Administration.[19]

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[19] *Ibid.*

That is, each theoretical assumption that is made regarding the nature of public education, and the nature of educational administration, finds its cue from the original and basic assumption having to do with the democratic nature of the culture. Thus, in the pictorial concept of the competency pattern the foundation is formed upon the postulates of democracy. It is assumed that these postulates are widely accepted in the culture and in reality are the basis for all human relationships within the society. This assures a common ancestry for educational administration functions and all the other varied functions and activities which make up the society. Specificity is achieved as the basic theory is focused to reveal the functions of public education and finally concentrated upon the job under consideration, i.e., the job of educational administration.

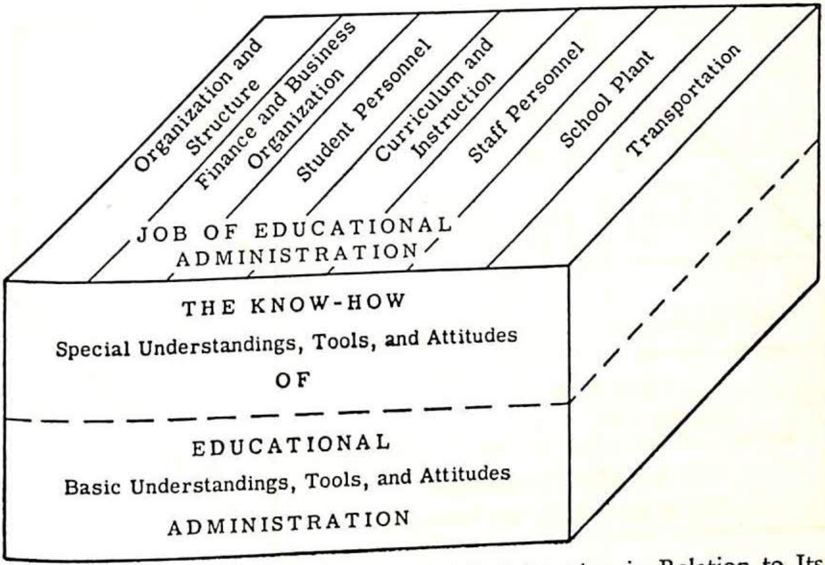
Organization and Structure
Finance and Business Organization
Student Personnel
Curriculum and Instruction
Staff Personnel
School Plant
Transportation
JOB OF EDUCATIONAL ADMINISTRATION
THE KNOW-HOW
Special Understandings, Tools, and Attitudes
OF
EDUCATIONAL
Basic Understandings, Tools, and Attitudes
ADMINISTRATION

FIGURE 4. The Job of Educational Administration in Relation to Its Know-How. *Source:* Southern States Cooperative Program in Educational Administration, *Tentative Progress Report in Planning for the Study of Preparation Programs in Educational Administration* (Nashville: SSCPEA, 1952), p. 9.

Figure 4 shows the know-how of educational administration to be divided into two subdivisions.

> By basic Know-How is meant those understandings, tools, and attitudes essential generally to democratic living and closely associated with the special Know-How necessary for job performance in educational administration. . . . Special Know-How refers to those understandings, tools, and attitudes which are important to job performance and usually directly related to the operation areas of the administrator's job.[20]

As was noted in this and previous discussions, statements on competence tend to become unworkable through one or both of two common difficulties: (1) the inability to state the competence in a specific and meaningful manner and (2) the inability to maintain consistency throughout the listing of skills, understandings, knowledges, and attitudes composing the competence. The SSCPEA pattern was designed to overcome these difficulties through the use of specific criteria chosen to select the items necessary for job performance.

Although implied in the discussion, the following listing of criteria, and criteria relationships, may throw additional light upon the design of the pattern.

I. Start with the job (educational administration).
  A. Portray the job in terms of:
    1. Basic theory (ideals of democracy).
    2. Educational theory consistent with basic theory.
    3. "Critical tasks" which make up the job, and which are consistent with educational and basic theory.
    4. Areas of administrative operation (job areas).
II. Determine the "know-how" equipment needed to do the job.
  A. Select know-how in terms of:
    1. Applicability to job performance.
    2. Sufficient critical importance in job performance.
    3. Consistency with the educational theory.

It is important to note that the SSCPEA concept refutes a concept of competence that has been widely held: the survey technique, based upon the idea that "the way most administrators perform a task constitutes the 'best' way of doing it." The SSCPEA pattern is designed to enable interested groups to portray the best picture of educational administration that it is possible for them to visualize. With this "best" picture as the "ideal," ongoing programs of administration can be examined to discover strong and weak points and to provide hypotheses regarding needed changes and improvements.

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[20] *Ibid.*, p. 11.

The same holds true with regard to preparation programs for educational administrators. Using the instrument to describe a "good," although theoretical, program, objectives, techniques, and expected behavior changes can be studied relative to the desired "know-how" pictured by the competency pattern. This procedure should reveal any changes needed to make the present program more effective.

TRADE AND JOB ANALYSIS

No discussion of competency patterns and techniques would be complete without mention of the trade and job analysis procedure. Fryklund, one of its chief exponents, has offered the following definition: "Trade and job analysis is the technique by means of which the essential elements of an occupation are identified and listed for instructional purposes." [21]

This technique can be used in analyzing most occupations although it is intended mainly for use in the trades and industries. Any occupation that involves fundamental procedures that can be listed can be analyzed for instructional purposes. Most occupations in whatever area of world activity where things are accomplished, where there is human achievement, and where past experience must be drawn upon for further achievement, can be analyzed so they can be taught in an orderly and systematic way.[22]

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[21] Fryklund, *op. cit.,* p. 3.

[22] *Ibid.,* p. 5.

There are, of course, many and varied kinds of analyses. Trade and job analysis is not to be confused with such things as production analysis, time and motion studies, and the like. Trade and job analysis has for its realm the task of identifying the elements necessary for job competence. The unique feature lies in its concept of the basic element of job competence—the *operation.* The operation may be further subdivided into its *doing* and *knowing* phases.

A job is composed of tasks that require doing. The operation is a unit of work in a job or task. In trade analysis an operation is considered as involving either "depicting," "forming," "shaping," or "assembling." The basic idea of *operations* is to insure the listing of the things that are done, and not merely mention the technique, tool, knowledge, or attitude that it used. For example, in woodworking, the operation would not be identified as "to use a plane." There are many ways of using a plane, and woodworking has many practical applications of that tool. "To use a plane to square the end of a board" is a more valid illustration of what is meant by an operation.

Another illustration may be drawn from the field of educational administration. "To train administrators to act democratically" would be considered a worthy objective for a preparation program in that field. However, "to act democratically," in itself, has no teachable content. It must be stated in terms of something the administrator does, and thus take the form of an operation. "To conduct a committee meeting in a democratic manner," "to act democratically in the preparation of the budget," and "to incorporate democratic procedures into the formulation of policies" are examples of some of the many operations which fall into this category. They are things the administrator does, and they have teachable content in terms of knowing and doing.

One additional statement may aid in giving a complete picture of what is meant by "an operation." It may be compared in likeness to an operation in arithmetic except that it involves ideas, materials, and people. Several operations are usually required in combination in the solution of a problem in arithmetic, and several operations are also usually required in combination in the doing of some task or job.

Most operations are thought of as cumulative in nature, as are the operations in mathematics. The elementary operations pyramid and become part of more advanced mathematical operations. Figure 5 illustrates this process. The theory of operations holds that

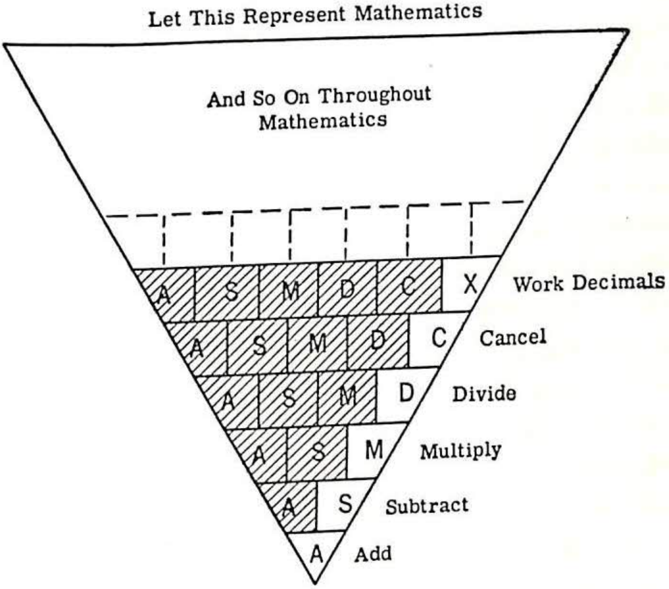
Let This Represent Mathematics
And So On Throughout Mathematics
A
S
M
D
C
X
Work Decimals
Cancel
Divide
Multiply
Subtract
Add

FIGURE 5. The Accumulative Nature of Operations in Arithmetic. *Source:* Verne C. Fryklund, *Trade and Job Analysis* (Milwaukee: Bruce Publishing Company, 1947), p. 47.

much the same cumulative effect may be found in the job content of the trades and the professions. Figure 6 is a representation of the accumulative nature of operations in woodworking.

From these illustrations several points stand out in determining what constitutes an operation.

1. An operation occurs frequently in a trade or profession with considerable uniformity of content.

2. It involves teachable content.

3. Alone it is usually of little value; it has its greatest value when combined with other operations.

4. It is such that, when it is put with other operations in combination, together they produce something larger without gaps or overlapping between them.

5. It can be broken down into definite steps of procedure.

From this discussion several of the assumptions and characteristics of the trade and job analysis technique may be discerned. All jobs are assumed to be composed of rather small performance units called "operations." The operations are made up of the doing phase and the knowing phase necessary for doing. Analysis of a job will reveal its characteristic operations, and when listed these operations provide the teachable content of the job. It is assumed that learning difficulty is a human characteristic and usually not

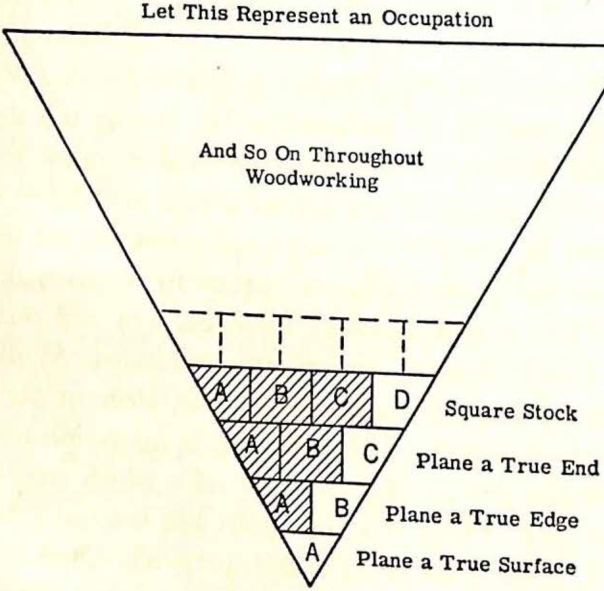

FIGURE 6. The Accumulative Nature of Operations in Woodworking. *Source:* Verne C. Fryklund, *Trade and Job Analysis* (Milwaukee: Bruce Publishing Company, 1947), p. 48.

the characteristic of an operation. Therefore teaching sequence is determined by the occurrence frequency attained by the operation in terms of the particular job being analyzed. That is, most-used operations are to be taught first because they furnish the foundation for other frequently used operations and so on through the content of the job. This, of course, means that instruction will proceed from the simple to the more complex operations.

Figures 7 and 8 illustrate the accepted technique for discovering the instructional elements (operations) and determining the instructional order or training sequence. Figure 7 is simply a listing, without reference to instructional order. Across the top of the chart are the tasks or sub-jobs that the workman does in the performance of his duties. These are the things the trainee will need to be able to do in order to attain competence for the job. Listed vertically on the chart are those operations which make up the tasks. Each task is then analyzed for operations and check marks are entered opposite the appropriate operations. As illustrated, some of the operations occur in every task, some of the tasks incorporate few operations, and some contain many operations. This feature provides the cue for the next step, which consists of assigning numbers to both the operations and the tasks. Beginning numbers (1, 2, etc.) are given to the operations which occur most frequently and so on up the numerical scale to the operations used less frequently, or the operations composed of several of the less complex operations. In similar manner, numbers are applied to the tasks listed across the top of the chart. However, in this instance, the low numbers are given to the tasks which show fewer and more basic operations.

The chart is now rewritten (Fig. 8) with each of the vertical and horizontal items placed in proper ascending numerical order. This exercise completes the analysis, and the chart is now in a usable form. From it the instructor can determine the items necessary for job competence, the important operations in terms of frequency of occurrence, the instructional order, and the additional

ANALYSIS OF JOBS IN GAS-WELDING

OPERATIONS		TYPICAL JOBS																										
		Spindle Hook 1	Flux Box 2	Vat - 16 Gauge 3	Fire Shield 4	A-C Brace - 8 Gauge 5	Miter Channel 90° 6	Angle Channel 90° 7	Frame Schedule 8	Tank Wrench 9	V-Block Jig 10	Build Up Shaft 11	Test Rod 12	Pipe Ell 13	Pipe Tee 14	Pipe Y 15	Pipe Reducer 16	Filler-Rod Holder 17	Test Pipe 18	Truck Wheel 19	Track Support 20	Cast Iron Gear Tooth 21	Broken Spoke 22	Build Up Lug 23	Repair Cast Iron 24	Square Frame 25	Floor Lamp 26	Tray Stand 27
1	Set up equipment	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Select and adjust tip	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	Adjust flame	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	Start foundation	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	Design and finish	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	Make a weld - no rod		6	6	6			6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	Make a bead weld - 45°	7	7	7	7			7	7		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	Make a bead weld - 90°		8	8	8			8	8		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	Make weld - rod any position							9	9	9	9	9	9	9	9	9	9	9	9	9		9	9	9	9	9	9	9
10	Make weld - rod horizontal				10			10	10	10	10	10	10	10	10	10	10	10	10	10		10	10	10	10	10	10	10
11	Cut steel plate				11					11	11							11		11							11	11
12	Cut bevel edge					12	12	12	12	12	12							12		12	12		12		12	12		
13	Trim-cut a straight edge						13	13	13	13	13		13	13	13	13	13	13	13	13	13	13			13	13	13	13
14	Butt-weld angle and channel							14	14	14								14		14						14		
15	Cut heavy rod and bar									15	15	15	15							15			15		15		15	15
16	Lap-weld thick steel									16	16		16							16	16					16	16	
17	Cut pipe and tubing										17			17	17	17	17	17	17	17							17	17
18	Weld pipe and tubing										18			18	18	18	18	18	18	18							18	18
19	Heat for expansion								19			19									19	19	19		19	19		
20	Build up weld											20	20									20	20	20	20		20	20
21	Lay out with template													21	21	21	21								21	21		
22	Lay out without template																	22	22	22							22	22
23	Weld cast iron																					23	23	23	23			
24	Fasten with clamps																				24		24		24	24	24	24
25	Take out strain in casting																					25	25		25	25		
26	Anneal																								26	26		
27	Braze																					27	27				27	27
28	Weld aluminum																										28	28

FIGURE 8. Securing an Instructional Order. *Source:* Verne C. Fryklund, *Trade and Job Analysis* (Milwaukee: Bruce Publishing Company, 1947), p. 79.

ANALYSIS OF JOBS IN GAS-WELDING																											
OPERATIONS	TYPICAL JOBS																										
	Spindle Hook	Tank Wrench	Vat - 16 Gauge	Fire Shield	A-C Brace	Miter Channel	Angle Channel	Pipe Tee	Flux Box 16 Gauge	Truck Wheel	Rod Holder	Broken Spoke	Build Up Shaft	Test Rod	Test Pipe	Pipe Ell	Floor Lamp	Pipe Y	Pipe Reducer	Track Support	Cast Iron Gear Tooth	V-Block Jig	Build Up Lug	Repair Cast Iron	Square Frame	Frame Schedule	Tray Support
Set up equipment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cut steel plate		✓		✓						✓	✓						✓					✓					✓
Select and adjust tip	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adjust flame	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cut heavy rod and bar		✓								✓		✓	✓	✓			✓					✓		✓			✓
Make a weld - no rod		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Make a bead weld - 45°	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Make a bead weld - 90°			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lay out with template								✓								✓		✓	✓					✓	✓		
Make weld - rod any position		✓					✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Take out strain in casting													✓								✓			✓	✓		
Trim-cut a straight edge		✓				✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Butt-weld angle and channel							✓			✓	✓											✓			✓	✓	
Start foundation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lap-weld thick steel		✓							✓				✓			✓			✓			✓			✓		
Cut pipe and tubing								✓		✓	✓				✓	✓	✓	✓			✓						✓
Weld pipe and tubing								✓		✓	✓				✓	✓	✓	✓			✓						✓
Heat for expansion												✓	✓							✓	✓			✓	✓	✓	
Build up weld												✓	✓	✓			✓				✓		✓	✓			✓
Make weld - rod horizontal		✓		✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Lay out without template										✓	✓				✓		✓										✓
Weld cast iron												✓									✓		✓	✓			
Fasten with clamps												✓					✓			✓				✓	✓		✓
Cut a bevel edge		✓			✓	✓	✓			✓	✓	✓								✓		✓		✓	✓	✓	
Anneal																								✓	✓		
Braze												✓					✓				✓						✓
Weld aluminum																	✓										✓
Design and finish	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

FIGURE 7. Making an Analysis. *Source:* Verne C. Fryklund, *Trade and Job Analysis* (Milwaukee: Bruce Publishing Company, 1947), p. 78.

operations which appear as the training progresses from task to task.

COMPARISON AND EVALUATIVE CRITERIA

Several concepts regarding competency patterns have been presented in the foregoing discussions: (1) the constellation concept; (2) Richards' formula for job success; (3) the Southern States Cooperative Program in Educational Administration competency pattern; (4) the critical incidents technique; and, (5) the trade and job analysis technique. Each has offered interesting ideas relative to competence and how to best describe it. The next step in this study will be to compare and evaluate some of these ideas in terms of how they may be used to construct a *comprehensive, consistent,* and *workable* competency pattern.

At this point, some additional consideration should be given to these criteria for clarification of meanings. Furthermore, we must find out the specific things the competency pattern must be and do in order to satisfy the criteria.

Comprehensiveness is considered first. What are the earmarks of a competency pattern which has this quality? *Webster's* provides the following definition: "Comprehensive 1. Including much; inclusive." [23] As is readily seen, to be comprehensive the competency pattern must include all the important elements which influence an individual's competence in job performance. A competency pattern may be made inclusive in either of two ways—by definition or by stating all the important elements that are needed to provide competence. The first method was seen in the discussion of competence as a constellation of interacting elements. In a tautological statement competence was defined as being composed of those elements necessary for competence. This of course is meaningless and cannot produce a useful competency pattern.

The second type of comprehensiveness, provided by stating all the important constituent elements, is essential for the type of competency pattern visualized here. These elements of job competence will include all the important things to be done, the way they are to be done, and the supporting "know-how" elements required for their performance. Since no one can be competent in all the various kinds of human endeavor, the competency pattern is not concerned with any concept of "complete competence." It will be deemed comprehensive if it includes all the important tasks in the particular job area under consideration and describes the ideals, functions, knowledges, tools, and attitudes needed by the worker in pursuing such tasks. This provides several evaluative criteria, which will aid in determining the applicability of the competence concepts to the problem of competency pattern development. The major criterion of *comprehensiveness* includes the following items:

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[23] *Webster's Collegiate Dictionary* (Springfield: G. & C. Merriam Company, 5th ed., 1946).

1. Is competence described in terms of the job, and are the important or critical tasks portrayed?
2. Are the job functions interpreted according to a basic theory of social living?
3. Are the necessary items of skill and knowledge included in the picture of competence?
4. Are worker feelings, attitudes, and general morale included in the pattern or design?

To be *consistent* is the next major criterion to be applied to the various competence concepts. Again *Webster's* provides a definition. "Consistent 1. Possessing firmness or coherence. 2. Having agreement with itself or with something else; accordant; congruous." [24] Thus the consistent competency pattern will show unity and lack of conflict between the statements of the various elements which form the design. The items will be consonant and will not require the resolution of conflicting concepts. Ideally, each item should support and strengthen each of the other items. This ideal is not required, but lack of conflict is essential. Even though an item may not support the other items it must not be inconsistent to the extent of contradiction or conflict.

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[24] *Ibid.*, p. 216.

Thus, using *consistency* as a generic criterion, three additional criteria may be listed:

1. Are the stated job tasks consistent with the basic social theory and the theory of education?

2. Are the "know-how" items—skills, knowledges, tools, and understandings—consonant with the items depicting the theory of education?

3. Does the competency pattern display inherent structural characteristics which tend to insure this desired consistency between the theory items, the job task items, and the know-how items?

It should be recognized that the criterion of *consistency* does not deny the validity of any of the many basic theories of social organization. Neither does it, in itself, prevent competence from being stated in terms of any one of these theories. However, since it is assumed "that a competency pattern which is usable can have but a single theory," all statements included in the pattern must be congruous with its basic postulates. Understandings, ways of acting, functions, theories, and attitudes which are not compatible with the basic theory will be excluded.

The third major criterion has to do with the usefulness of the competency pattern—in other words, its *workability*. From *workability* stem these criteria:

1. Will the pattern aid in identifying the important tasks to be performed in discharging the responsibilities of a job?

2. Will the pattern aid in identifying the personal equipment (skills, knowledges, understandings, etc.) needed in the performance of a job?

3. Will the pattern aid in identifying learning situations applicable to the training of workers for the job?

Workability is used here in a limited sense. In a more comprehensive connotation workability means the success of the pattern when put to the test of actual usage over a considerable period of time. Obviously, such a complete testing is beyond the scope of this investigation. For this reason, workability of the pattern may be only partially assayed in this study. As indicated by the criteria above, workability is considered relative to the amount of direction the pattern will provide in identifying important tasks, abilities, and learning situations, and further, to the ability to expand without losing its basic unity.

We have described a number of criteria for evaluating the various competence concepts. These criteria were evolved from the basic criteria of *comprehensiveness, consistency,* and *workability.* In simplified form, the complete criteria listing may be presented as follows:

I. Regarding comprehensiveness, the pattern:
   1. Includes the important job tasks.
   2. Includes basic theory of society.
   3. Includes necessary items of skill and knowledge.
   4. Considers attitudes and morale of the worker.

II. Regarding consistency, the pattern:
   1. Operates to align job functions with basic theory.
   2. States "know-how" consonant with job functions and theory of education.
   3. Insures consistency through excluding incompatible items.

III. Regarding workability, the pattern:
   1. Aids in identifying the important job tasks.
   2. Aids in identifying personal equipment (know-how) needed.
   3. Aids in identifying appropriate and needed training activities and situations.

Figure 9 shows in chart form the results of applying these criteria to the five concepts of competence.

It should be noted that this analysis (Fig. 9) is not an attempt to validate or to discredit any of the concepts of competence. Rather, it is designed to search out those elements which may prove

	COMPREHENSIVENESS			
	Includes the Important Job Tasks	Includes a Basic Theory of Society	Includes the Necessary Skills and Knowledge	Includes the Worker's Morale and Attitudes
Constellation Concept	NO	NO	NO	NO
Richards' Formula	YES	NO	YES	YES
Critical Incidents Technique	YES	NO	YES	YES
SSCPEA Competency Pattern	YES	YES	YES	YES
Trade and Job Analysis	YES	NO	YES	NO

	CONSISTENCY		
	Aligns Job Functions with Basic Theory	States Know-How Consonant with Job Functions and Theory of Education	Excludes Incompatible Items
Constellation Concept	NO	NO	NO
Richards' Formula	NO	NO	NO
Critical Incidents Technique	NO	NO	NO
SSCPEA Competency Pattern	YES	YES	YES
Trade and Job Analysis	NO	NO	NO

	WORKABILITY		
	Identifies the Important Job Tasks	Identifies the Personal Equipment Needed (Know-How)	Identifies Appropriate Training Situations
Constellation Concept	NO	NO	NO
Richards' Formula	YES	YES	YES
Critical Incidents Technique	YES	YES	NO
SSCPEA Competency Pattern	YES	YES	NO
Trade and Job Analysis	NO	YES	YES

FIGURE 9. Application of Criteria to Five Concepts of Competence.

useful in solving our problem, i.e., the construction of a competency pattern. The "no" and "yes" entries in Figure 9 reflect the degree of usefulness assigned to a concept in terms of each of the various criteria. A "no" entry should not be construed as meaning that a concept is completely lacking in that quality, and that the quality was not considered important by those who formulated the concept. It does mean, however, that the element was not portrayed in a manner applicable to this problem. For example, in the line which considers Richards' formula, "no" is found in the column regarding the inclusion of a "basic theory of society." It is well known that the formulators of Richards' formula were adherents of the democratic theory of society. They were, however, primarily concerned with the development of competent vocational workers, and thus limited the formula to an expression of job success in that area. Training for success in social living was left to the field of general education. McCarthy provides the following explanation:

> It [Richards' formula] is limited in its scope and does not consider the whole personality of the worker who is also a citizen. When Allen and Richards originated the formula, they recognized the necessity for the development of a well-rounded program of vocational education. These two men were active in the development of the Smith-Hughes Act, which emphasizes the need to build a well-rounded course of study. Allen and Richards, however, left that responsibility to other educators besides those in the field of vocational education. The formula has not been expanded beyond the stage developed by Allen and his associates in the United States Office of Education, and general educators have not added to it the terms for which they were responsible.[25]

Similar examples could be found concerning the other "no" items in Figure 9. However, this discussion is not concerned so much with the "nos" as with the "yeses." The "yes" items indicate usable material which may be applied to the problem of competency pattern construction.

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[25] McCarthy, *op. cit.*, p. 205.

As noted in Figure 9, the constellation concept has little of value to offer toward the construction of a competency pattern. It does not provide specific material which would be helpful in organizing the tasks, knowledges, skills, and attitudes necessary for competence.

An examination of Richards' formula appears much more fruitful in this respect. It includes the important tasks which constitute the job, considers the know-how needed to do the job, and is concerned with the attitudes and morale of the worker. In terms of *workability* Richards' formula also appears strong. It presents a framework to be used in discovering the important things the worker does and the personal equipment he needs, and may offer assistance in identifying appropriate situations to be used in training a person for a particular job.

Richards' formula does not, however, include a basic theory of society. This fact makes it difficult to insure consistency in the items included under the formula. Although the formulators of the plan undoubtedly intended that the democratic form of society be "understood" as its underlying basis, a lack of inclusion of such theory in the plan makes it impossible to align the job functions with the basic theory, to make the know-how equipment consonant with the theory, and to devise a method whereby items not compatible with the basic theory will be excluded from the pattern.

The critical incidents technique, when evaluated in terms of the criteria shown in Figure 9, presents some important ideas on competence. The notions that competence is to be judged solely upon observed behavior and that critical job requirements must be stated in terms of required behavior are helpful in devising a comprehensive competency pattern. When the idea of using only the important or "critical" items of behavior is included, the pattern may be made comprehensive without encountering the cumbersome details often thought necessary. But as a pattern the technique lacks needed attention to a theoretical basis. This omission makes it extremely difficult to achieve consistency in describing the job requirements and in evaluating worker behavior.

The SSCPEA competency pattern scores highest in terms of completeness. It considers all of the items deemed necessary for comprehensiveness. Of the various competence concepts that were considered, the SSCPEA pattern is unique in its offering of a plan to insure consistency. By aligning the job functions, and the personal equipment needed by the worker to carry out the functions, with a basic theory of social organization, this plan proposed to exclude functions and understandings which are not compatible with the basic theory. The plan also appears workable for identifying the important job tasks and the personal equipment (know-how) that is needed by the worker.

Since the SSCPEA pattern makes no direct mention of morale, an explanation of why it was scored as including this factor is needed. Additional explanation is also necessary to show why such an important factor as morale does not make a direct appearance in the pattern. The answer to both of these questions is to be found in the improved modern understanding of morale.

At an earlier time high morale was thought to be achieved in direct relationship to the amount of physical and mental comforts the individual was receiving. Good food, clothing, and housing (for physical comfort); insurance plans, hospitalization, and medical care plans; and group recreation organizations (for mental comfort) were thought to provide the answer. These kinds of activities represented most of the conscious and direct attempts aimed at providing and maintaining adequate morale.

Some modern studies[26] have shown, however, that the above factors do not insure high morale. At times, and under certain conditions, decreasing standards of physical comfort and increasing amounts of mental pressure have caused no decline in morale but have actually resulted in a decided improvement in individual morale. Further, it has been determined that this comes about when the individual has identified himself very definitely with a clear-cut purpose. Thus, morale is probably not primarily a function of the amount of physical and mental "comfort" an individual receives but instead reflects the degree of his self-identification with an important purpose.

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[26] F. J. Roethlisberger, *Management and Morale* (Cambridge: Harvard University Press, 1941).

It is in this connection that the SSCPEA pattern deals adequately with the factor of morale. Morale seems to be intrinsic to individual identification with purposes, and the SSCPEA pattern is designed to bring about the most intelligent and purposeful behavior possible. Thus, morale will be adequately taken care of as the individual patterns his behavior toward more purposeful ends.

The trade and job analysis concept, while lacking much in terms of comprehensiveness and an insurance of consistency, nevertheless presents a concrete procedure for identifying the tasks a worker must perform in doing his job, and the skills and knowledges necessary for competence in task performance. The concept of "operations" provides a basic procedure for identifying the things done in job performance and makes the analysis technique a valuable and workable instrument for finding, to a specific degree, the tasks and know-how contained in a job.

SUMMARY

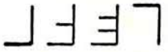
This investigation and evaluation of some of the efforts that have been made to develop a workable competency pattern have revealed several important items. It appears that there is no pattern which fully meets the criteria for the type of pattern desired in this study. Each of the concepts studied, however, provided valuable material concerning the elements which, when properly assembled and interrelated, make up competent behavior. Some of the patterns were designed for specific jobs, and others were all-inclusive in scope but unworkable in practice. Some showed excellent techniques for identifying job tasks, and others were strong on the basis of theoretical assumptions. It is assumed that a competency pattern can be constructed to meet the desired specifications of *comprehensiveness, consistency,* and *workability*. The aim of the next chapter is to present such a pattern.

CHAPTER 3

Developing the Competency Pattern

The preceding chapter has investigated some concepts which regard competence as a pattern of behavior. The investigation has been directed toward finding elements and ideas which may be used in devising an ideal pattern. A number of such needed elements have been identified, and it is the purpose of this chapter to show how they may be put together to describe competence in its ideal sense.

A word of caution: The Competency Pattern is not an end in itself but a procedure for attacking a troublesome problem. Professional competence, as in educational administration, may be thought of as a mass of interacting and related items. These items may be stated as traits, muscular skills, communication skills, methods of thinking, knowledges, understandings, and the like. But such listings are difficult to use in any meaningful way because the items are not related. Much work has previously been done to define in a very specific way each of the terms included in a listing of competence factors. However, this effort has not improved the situation a great deal because a listing does not show relationships no matter how accurately the terms are defined. When the factors are arranged in a manner which will describe relationships, the listing becomes more than a mere statement of factors; it is a pattern. For example, a list of nonsense characters may be prepared thus:



With definition they may become more meaningful and better understood:

1 2 3 6

And finally, with the showing of relationships the meaning is completely clarified:

$$1 + 2 + 3 = 6$$

Of course the Competency Pattern deals with relationships infinitely more complex than the simple addition of a few digits. Skills, knowledges, and understandings do not remain constant and therefore will not admit of the use of a mathematical formula. Also, behavior phenomena tend to be both unique and transient. Nevertheless, actions may be identified or classified in terms of patterns of behavior. When analyzed, conscious action usually shows three important characteristics: (1) it is a "doing" of something; (2) it involves the individual's values, beliefs, and feelings; and (3) it requires the use of some skills, knowledges, and understandings.

If these action factors are deemed valid, it then follows that competent action is an appropriate combination of elements from such factors. In a direct action, where the purpose is as immediate and direct as the behavior, the combination will be quite simple; in other and more complex actions, where purpose is of longer range, the relationships will become more subtle and circuitous. But in each instance the factors of values, thing done, and skills and understandings will be present.

In this section it will be the writers' intent to present a competency pattern designed to integrate these factors and thus help provide a procedure for removing one of the major barriers to the improvement of educational programs. The competency pattern will be presented in a somewhat abbreviated form so that the reader may grasp its general significance; more complete development and justification will be reserved for a subsequent section.

A COMPETENT MAN IN ACTION

Perhaps taking a look at a competent man in action will be the best way to start developing a plan for patterning competence. The reader is asked to visualize the items in a typical day's work in the life of a superintendent of schools.[1] After breakfast the superintendent drives down to his office. On the way he thinks over the various problems connected with his work. At the office he looks over his mail and dictates some letters to his secretary. The building committee and the architect are meeting at ten o'clock so he hurriedly finishes with the dictation, gathers up some blueprints and sketches, and rushes over to meet with this group. At the meeting he presents facts about the need for the building and outlines his ideas regarding its layout and design. The discussions last until noon, at which time our superintendent is scheduled to speak to one of the local clubs at its luncheon meeting. After lunch he drives over to meet with the school principals and discuss the intercity athletic program, then back to the office for appointments with patrons, the director of the budget, a political leader, and an applicant for a teaching position. These sessions finish the day and he somewhat wearily departs for home.

ANALYSIS OF THE ACTIVITIES

What will an analysis of these and similar job actions reveal about the elements of competence? What factors and relationships produced the work pattern of this man? Evidently competence relates directly to doing. The description of a typical workday was filled with the things he did. He thought, he dictated letters, he gathered material, he made a speech, he attended meetings, he held interviews and conferences—his entire day was made up of doing. Thus our superintendent was not in any abstract sense deemed either competent or incompetent. He became so as he discharged his various duties, and through observation it was possible to judge the quality of his performance.

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[1] This could be transposed to any responsible job—teacher's, lawyer's, doctor's, carpenter's, etc.

THE JOB ELEMENT

At this point we may tentatively identify one of the elements in a description of competent behavior. Since a single person could not possibly achieve competence in all jobs and occupations, and since competence is to be assayed in terms of job performance, a description of competence must be in terms of the job to be done. In other words, before competence can be described there must be a description of the job for which it will function. Although some of the same factors—ways of thinking, ways of dealing with people, important beliefs, and the like—will be found in competency patterns for various occupations, there will of course be important differences in a competency pattern for an educational administrator and, for example, one for a research chemist. That our description must include the *element of the job* becomes an inescapable fact.

THE KNOW-HOW

With the establishment of *the job* as an element in any competency pattern, the search for additional elements may proceed. As the superintendent carries out the various tasks of his job, he reveals the possession of an impressive amount of personal equipment. This does not refer to physical gadgets and devices but to the skill, knowledge, and methods he has at his command. He did not simply attend the architect's conference; he had made a survey to determine the building needs and had prepared material to show the kind of educational program the building was to house. At the luncheon he did not speak in generalities and platitudes; he attempted to give those businessmen some genuine insights into what the schools were trying to do. When meeting with the principals he stimulated them to see the problems involved and helped achieve consensus regarding appropriate action. All these tasks required skill, knowledge, understandings, and a genuine command of the best methods of problem solving. Without a doubt, these factors are essential to high-quality (competent) job performance. After the job has been identified, they are the personal equipment needed to do the job. Therefore, the second element in a competency pattern must be the necessary skills, knowledges, and understandings—the needed *know-how.*

Thus far two essential elements of a competency pattern have been identified: first, the job to be done, and second, the know-how needed to do the job. Are there other and perhaps more subtle elements? If so, it is imperative that they be identified; otherwise the portrait of a competency pattern will be incomplete.

Since we have considered the *what* and the *how* of this superintendent's job performance, will it not be appropriate to consider also the *why?* Why did he try to make adequate preparation for his meeting with the building committee? Why did he refuse to make political capital by manipulating his principals as suggested by the political leader? Why did he treat the teacher applicant with courtesy and tact when it was quite obvious that the person was not, and probably never would be, a competent teacher? Why did he work to have the principals see their athletic problems and reach agreements as to what to do when it would have been much easier simply to have told them the answers? Why did he give the luncheon members facts and plans regarding the school program rather than a "hail fellow well met" kind of speech?

THEORY AND BELIEFS

From a careful consideration of these questions it becomes evident that the superintendent's behavior pattern also contained some important beliefs. He would not agree to manipulating the principalships because such behavior would be contrary to his theory regarding appropriate human relations. He was kind and courteous toward the incompetent applicant because he subscribes to the theory that all people have dignity and worth. He gave the businessmen facts and plans regarding the school program because he believes informed patrons will make appropriate decisions concerning support for the program. All of his important decisions and responses depended on his beliefs and theory. As an aside, it is in order to assume that this leader had thought seriously about the question of beliefs and theory. He knew to which theories he subscribes and directs his actions thereby. That is, his theoretical beliefs are truly "operational beliefs" and not just something to which lip service is paid on appropriate occasions.

Regardless, however, of the effectiveness of operational beliefs, it is clear that a behavior pattern contains elements of theory. A usable competency pattern must include such elements. Furthermore, since they have such a direct bearing upon behavior, *theory and beliefs* will have at least equal rank with the previously identified elements of the *job* and the *know-how.*

NEXT STEPS

The analysis of the superintendent's behavior has been productive. Three major elements in his pattern of behavior have been identified. After some additional examination, it may be tentatively assumed that the element of the job, the element of know-how, and the element of theory are indeed the important factors in behavior. All other items are of lesser significance and will take their places under one or another of these major categories. What is the next step?

Logically, the next step will consist of an expansion of the major categories. What items will be placed under the headings of "The Job," "Know-How," and "Theory"? Should there be additional subheads for each category? What criteria are to be employed in each of the listings? With such broad categories it should be possible to develop some very impressive listings. But wait a moment: there is a false note here. Is this not the way the job has always been done? Will not the final result be the same as in the past—impressive, but not very useful, lists of things? This discussion started out talking of patterns and relationships but somehow got off into the business of making lists, and lists alone do not portray patterns and relationships. It is neither logical nor appropriate to start making lists before the relationships of the original basic elements have been established. Thus the next step is not to list items but to construct a pattern from the basic behavior elements.

PATTERN RELATIONSHIPS

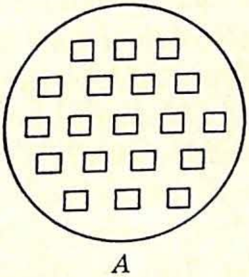
Perhaps the chemist can furnish a clue to the nature of pattern relationships. Frequently in his work he uses symbols: e.g., H_2SO_4 to designate sulfuric acid. To the casual observer this appears to represent a simple addition of elements. Two hydrogen plus one sulfur plus four oxygen equals sulfuric acid. However, the chemist knows that such a simple addition falls far short of representing the actual nature of sulfuric acid. In fact, if he places hydrogen, oxygen, and sulfur in a container and mixes them together, the result will in no way resemble sulfuric acid. Instead of a corrosive liquid there will be only the original items in the container: hydrogen, a colorless gas; oxygen, another colorless gas; and sulfur, a yellow powder. That the elements did not combine to form sulfuric acid, however, would not baffle the chemist. He understands that the acid is formed when the elements assume certain relationships, and that these relationships are brought about through certain procedures.

The above discussion provides an appropriate analogy regarding the nature of a competency pattern. Competence does not occur until the necessary elements are present, and then only as those elements interact to bring about the behavior appropriate to the situation. Thus, the need is for a pattern which will show these necessary relationships—a blueprint to indicate how the job, the know-how, and the theory come together to produce the desired competence.

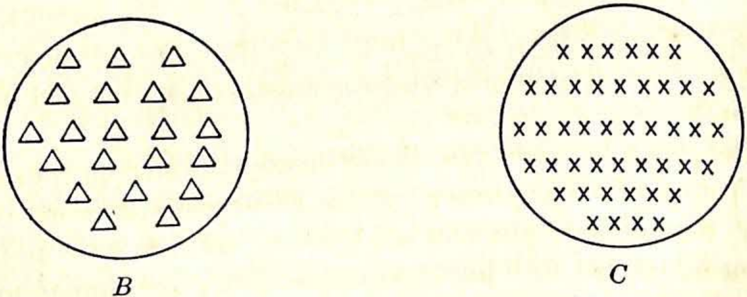
GRAPHIC REPRESENTATION OF THE COMPETENCY PATTERN

In the manner of the chemist and the mathematician, some symbolic representation may assist in the portrayal of the competency pattern relationships and perhaps clear up the difficulty. Since there are no symbols currently in use for the elements of competence, some will have to be chosen. A small square (□) may represent an item of theory, a triangle (△) may represent an item of know-how, and an (X) will be used to represent an item of the job—a particular task.

Figure 10 shows these items as separate entities. Group *A* represents all the items in the theory element, group *B* all the know-how factors, and group *C* all the job tasks. In terms of the analogy from chemistry, it might be said that *A* represents the hydrogen,



A
Theory Elements



B
Know-How Factors

C
Job Tasks

FIGURE 10. Competence Elements in Symbolic Terms.

B the oxygen, and *C* the sulfur. Of course, at this point competence does not occur any more than sulfuric acid occurs when hydrogen, oxygen, and sulfur are separate entities.

Figure 11 shows the elements brought together in the same container, as it were. Again the analogy from chemistry is apropos. As the chemist failed to produce acid by simply mixing together hydrogen, oxygen, and sulfur, neither shall we demonstrate competence by simply lumping together the elements of job tasks, know-how, and theory. As yet the required interactions have not taken place. Know-how as a large unit does not interact with the job as a unit and with theory as a unit. The required interactions come about as particularized items of know-how relate themselves to specific tasks and are translated into action according to the

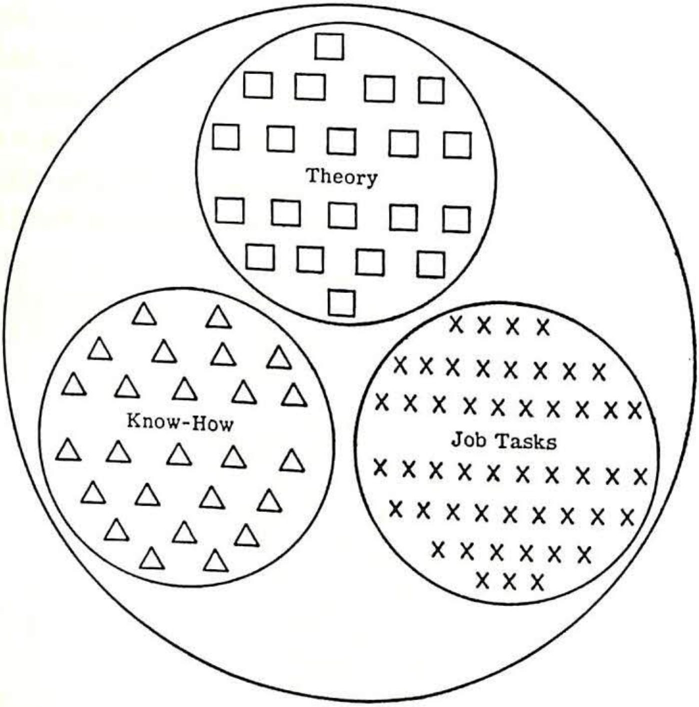


FIGURE 11. Competence Elements Brought Together but Without the Interactions Needed to Produce Competence.

appropriate theory. Some may tend to question the truth and logic here implied. Is it indeed possible for a person to have the necessary knowledge, theoretical concepts, and understanding of his job and yet not be able to obtain the interaction of these elements necessary to demonstrate job competence? Modern research appears to give an affirmative answer. Actual possession of the elements is no guarantee of competent behavior on the job.

Thus the next step is to remove the barrier circles and provide for element interaction and the formation of relationships. Figure 12 indicates how the elements will intermingle and interact to produce competence. Naturally this represents anything but a static situation. There is continual flux and change. As the person is confronted by stimuli from the situation focused by his attention, he goes through a continuous process of mental trial and error. He

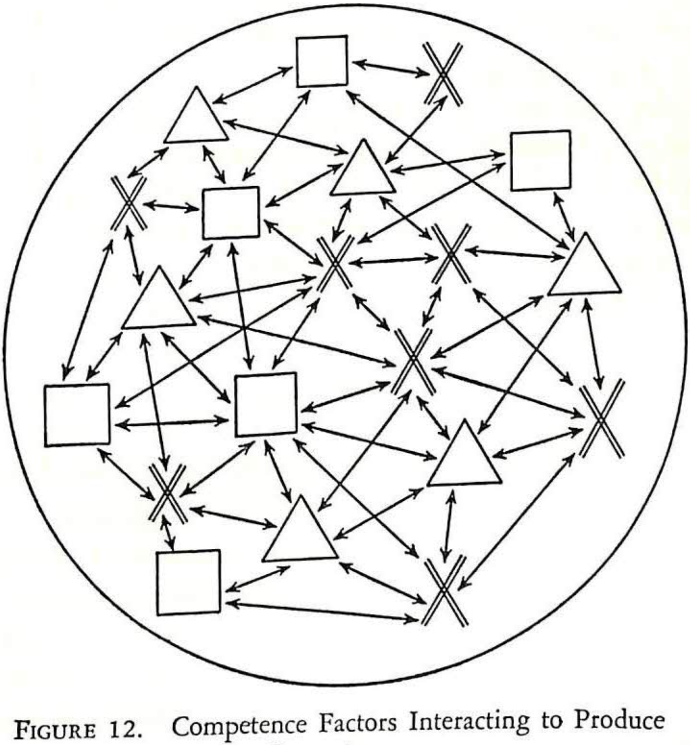


FIGURE 12. Competence Factors Interacting to Produce Competence.

surveys know-how elements, evaluates methods of proceeding, and makes value assessments according to his theory and beliefs.

THE CATALYST

At this point there appears to be a need to identify another element of the competency pattern interaction. If the analogy drawn between the elements of chemistry and the elements of competent behavior is granted a degree of validity, and further, if it is admitted that a person may actually possess the elements of competence and yet not display competent behavior, then another factor is called for—a catalyst, as it were, which will cause the factors to interact in an appropriate and dynamic way. This catalyst or focal point of attention will be something that demands action from the person and thus will cause his abilities to be brought to bear to make the action possible. It must initiate the selection of appropriate elements of behavior and cause these elements to interact so as to actually produce the behavior. The most capable person will be no more than a storehouse of possibilities unless there is something upon which his skills, knowledges, and abilities can be exercised.

Examination and reflection indicate that the problem-solving situation meets these requirements and provides the catalyst. Obviously a person never uses all of his knowledges, skills, and abilities at any one time. Not only is this impossible but it would also be quite irrational. Not all the equipment one possesses would be appropriate to solving a particular problem or making a response in a given situation. Without the capacity to choose the proper skills and knowledges demanded by a situation we would indeed behave erratically—using addition when subtraction was in order, swimming skills where there was no water, and so on.

When the ability to choose those items of personal equipment—knowledge, skill, and the like—applicable to the situation is coupled with the ability to select from many external stimuli only those bearing upon the problem, it becomes evident that the "problem" is a very potent factor in competent behavior. The problem is the "catalyst" which causes the selection and proper interaction of the elements, which result in the production of intelligent responses.

Consider, for example, this incident in the life of a prominent naturalist as he drives his car to a neighboring city. He has agreed to speak at a luncheon meeting and has just enough time to make the drive and keep his appointment. On a rather deserted stretch of road his car breaks down—a flat tire. Immediately there arises a real and pressing problem. To get the tire replaced, and quickly so as not to be late for his speaking engagement, is his primary and exclusive concern. To his dismay there is no jack with which to raise the wheel. He looks around. Near the road is an old-style rail fence. One of the rails will serve as a lever, and there are some rocks to be used as a fulcrum. His knowledge of levers enables him to see the possibilities, the wheel is lifted, and the spare is put on. Hurriedly he drives away to his luncheon meeting.

This example illustrates several facts. First is the importance of the problem at hand. All of the man's activities were directed toward replacing the tire and continuing on his journey. He used skills and knowledges appropriate to this end and any other skills and knowledges he possessed were left inactive. Second, the problem caused him to see relationships not otherwise apparent. He had noticed the rail fence before the breakdown; it was something to keep the cattle enclosed. However, when the problem of the flat tire arose, the rail became something more than part of a fence. It was a lever to use in raising the wheel. Third, the problem caused him to shut out certain stimuli not pertinent to its immediate solution. Growing along the edge of the old rail he used as a lever were some rare fungi, and although the naturalist specialized in collecting and studying such items, he did not notice at all the specimens growing on the rail he was handling. The pressing nature of his problem with the flat tire had brought about such a strong integration of behavior elements that even the ordinarily cherished stimulus of finding a new fungus specimen was not permitted attention.

Thus in a real problem-solving situation the concern with the problem furnishes the activating catalyst which calls into play the equipment needed to deal with it. Moreover, this is true throughout the length of time the particular problem is being considered. Skill, knowledge, and theory are actively integrated in the formation of trial solutions, the actions which these solutions indicate, the evaluation of progress, and, if needed, the hypothesizing of new and additional solutions. When the problem is a simple one the entire process of concern, element integration, attack, and solution may take only a short time. With a more difficult and complicated problem the process may continue for weeks and even years. However, this does not mean that such a long-term problem will occupy the individual's exclusive attention. Other items will also demand his attention. When this happens the integrations formed under the stimulus of the original problem will be disbanded, so to speak, and their elements freed to participate in new integrations appropriate to the new problems. At a later time, when the original problem is again under attack, the elements will reassemble to strive for its solution.

From this viewpoint, therefore, it is evident that the problem is the activator in any situation requiring the use of reflective thinking. But there is another side to the picture. Not all the actions of a competent person are problem-solving efforts. Many of the things we do are habit-like in character. Also, some activities which pose problems to one person may have been reduced to the level of habit by another. To the person who has never changed an automobile tire such a job poses a real problem situation; to the garage mechanic it is no problem at all and he can do it "without thinking."

In the phrase "without thinking" lies the clue to the connecting link between habits and competence. Thinking is a higher level of mental activity than is a purely habit response. While it is true that habits may be formed through nonthinking drill, it is also true that the better kinds of habits are built up as a result of intelligent and thoughtful problem-solving activity. Each time a person meets and solves a particular problem he builds up a set of responses to use in similar situations. At first reflective thinking is required and trial-and-error attempts are made. Gradually, however, less and less thinking is needed as the organism finds it can reuse the results of past thinking. The action has now become a habit.

Thus, we recognize the problem as an adequate "catalyst" for all kinds of competent behavior. In a pressing problem situation the problem acts as a first-hand catalyst. In a habit-response situation the problem continues to be the catalyst, although now acting somewhat remotely and as a reflection of the thinking that originally went into the formation of the habit. Thus habits are (ideally) permanent integrations of behavior elements that may be brought to action without the "thinking" originally required for their formation.

FURTHER INTERACTIONS AND INTEGRATIONS WITHIN THE COMPETENCY PATTERN STRUCTURE

Let us return for a moment to Figure 12. The arrows in this diagram indicate connective interactions. A particular task to be done, an item of concern to the individual, causes him to reflect upon possible courses of action. If his training, experience, and learning have been effective he possesses a number of know-how items appropriate to the task. More important, however, will be his skill in bringing what he knows to bear upon the problem. Since this kind of skill is believed to be the result of learning, there are implications here regarding the need for training programs which stress that the use of know-how in problem solving is as important as the possession of know-how. Actually, the extent to which the know-how is available for use is probably determined in large measure by how it was acquired in the first place. That is, if the know-how was learned in a problem-solving activity it will ice in ridding psychology of some of its introspective mysticism. It assisted in eliminating the widely held concept of a dualistic organism—mind versus body. This in itself was a worthy contribution and helped bring psychology from the realm of conjecture into the area of careful experimentation which made of it a science.

Building upon the same monistic concepts as behaviorism, but replacing its theory of the association of multitudes of atomistic specifics by the idea of dynamic fields, next appeared the Gestalt and organismic psychologies. Although far from being completely comprehensive and satisfactory, the Gestalt and organismic psychologies have taken into account other connections which were necessary to explain many of the more obvious kinds of human behavior. Further, they have taken note of actions which are of a higher mental level than those of the purely habit response, the mainstay of the behaviorist.

For our purposes here, it is sufficient to say that these more modern psychologies—Gestalt and organismic—have brought to light information and concepts which show that learning is the result of directional activities engaged in by the human organism as it attempts to achieve purposes and solve problems. This learning is of a higher order than pure habit response and consists of getting meanings through the seeing of relationships. All the factors which bear upon a concern or problem constitute a barrier situation which prevents advance toward a goal; seeing relationships between the factors as they are arranged in a particular situation, and gaining some insights as to how the factors can be manipulated to improve the situation, is learning of the highest order. Thus, organismic psychology gives much more power to the organism and its use of insights and ideas than was ever accorded it under behaviorism. According to the precepts of the organismic psychologies the individual takes part in determining his direction of activity and is not just a slave to the happenstance stimuli which come his way. That is, he can decide, at least in considerable degree, upon the purposes he desires to pursue. He can then select stimuli as they apply to these previously selected purposes, and he is not equally affected by each of the many stimuli that are constantly impinging upon his senses. He is able to exercise a choice whereby those that are appropriate to the problem under consideration are allowed full entry to the thought processes and those that are not relative are shut out or are so attenuated as to be ineffective in causing any action. In addition, and of more practical importance, he can proceed to "think"—get ideas and insights—about the problem situation as it affects his purposes. "Thinking" is a process of bringing together into a whole or "Gestalt" all the functional knowledges, facts, ideas, and theories bearing on the problem. This differs from the usual method of lumping together all the appropriate knowledges, theories, methods, and the like, in that in the "Gestalt" things are arranged in proper relationships, one to the other, so that the effectiveness and latent possibilities of the situation can be ascertained and used to direct action.

Also included in this concept is the idea of what might be termed in electricity a "feedback" circuit. As the organism acts to proceed toward its purpose or goal, it is not only using the results of previous thinking and acting but continually gathering and feeding back into the "Gestalt" (mental picture of the situation) additional information concerning the progress that is being made, new or additional difficulties, and other results of the current actions. Thus the mental picture of progress being made (estimate of the situation) is continually changing, and future actions are continually being modified by information furnished by the feedback system, so that the organism knows not only what it tried to do but also how successful it was. To draw an illustration: under behaviorism the human organism might be compared to the mechanism of a rifle. When appropriate and specific stimuli were received the rifle fired. However, nothing reported back to the gun whether or not it had hit the target and, if not, just how the sights should be adjusted in order to improve the aim for the next firing. Under the Gestalt psychologies the human organism not probably be readily available for use in further problem solving. If learned otherwise it may very well remain unused and inert knowledge.

Concomitant with the interactions relating to suitable know-how will be other important interactions relating to beliefs and theoretical concepts. The individual may recall possible actions that might solve the problem but reject them because they are contrary to his value theory. As an extreme example, murder may present itself as a way of solving the problem of an obstructive and noncoöperative school principal. However, because of individual and social values such a method is not acceptable and is immediately ruled out.

A specific application will illustrate the kinds of element interactions necessary to produce competent behavior. One of the important concerns of an educational administrator is effective pupil-teacher-parent planning. Written in the form of a job task (X) this item might appear as "To foster pupil-teacher-parent planning." With attention focused upon this task, the administrator perceives almost immediately an interaction with a theory (☐) element. Does he believe that pupils are incapable of helping to plan their learning experiences, or does he feel that they have the right to participate, according to their level of development, in the planning process? Or, perhaps, does he believe that the curriculum expert should do the planning and the teacher carry out the plans? It is seen that the job task "To promote planning" will be an entirely different thing under each of these theories.

Figure 13 is a segment from a competency pattern taken at a time when the task "To promote pupil-teacher-parent planning" was occupying the administrator's attention. Thus this particular task is central to the diagram. This superintendent believes in the "worth and dignity of each individual" and in "the right of each person to participate in plans and decisions which directly affect his welfare." As seen in the figure these beliefs interact with the job task to help define the scope of the task and to delineate

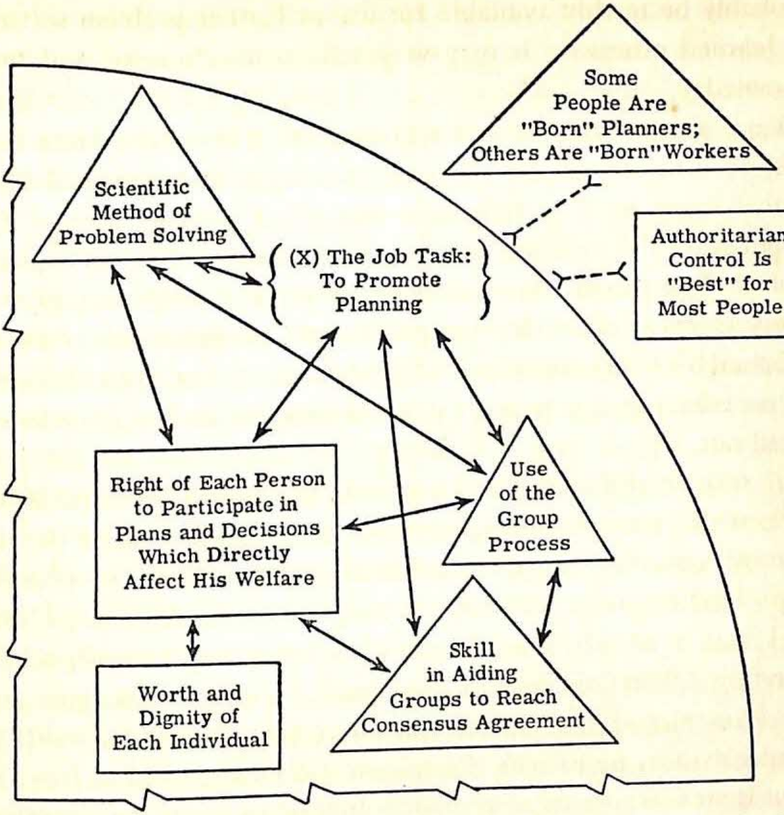

Some People Are "Born" Planners; Others Are "Born" Workers
Authoritarian Control Is "Best" for Most People
Scientific Method of Problem Solving
(X) The Job Task: To Promote Planning
Right of Each Person to Participate in Plans and Decisions Which Directly Affect His Welfare
Use of the Group Process
Skill in Aiding Groups to Reach Consensus Agreement
Worth and Dignity of Each Individual

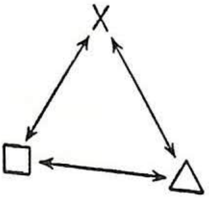
FIGURE 13. Competency Pattern Interactions for a Particular Task.

desirable task objectives. The superintendent recognizes that, by and large, the task is one of making it possible for people to get together for planning, and of stimulation to group planning.

At the same time items of know-how (△) are coming into play. The administrator's understanding of the group process tells him the kind of operating climate he must provide so that the groups can do effective planning. He can rely upon his skill in aiding groups to reach consensus decisions to assist him in getting the groups to produce. His knowledge of the scientific method of problem solving leads him to stimulate the groups to understand that planning is only one phase of a total process, and that execution of plans and evaluation of results are equally important. Note that these know-how items also interact with, and are in agreement with, the theory. There is a cohesiveness throughout the total pattern. The various *items are congruous; they complement and strengthen as they interact.* This demonstrates the selective feature of the competency pattern. For example, two items have been placed outside of the boundary—exiled because of incompatibility. One of the items is a know-how understanding and the other is a theory factor. Each is foreign to the concepts within the pattern and therefore may not be used. However, we must realize that, had the superintendent been of an authoritarian rather than democratic persuasion, these items would have been appropriate to the pattern and would have been used instead of some of the democratic items which were included. Thus, the pattern is a tool—a tool to search out and describe quality behavior. If we are concerned with democratic behavior, the pattern will show the "best" in democratic action, and if we are interested in autocratic behavior, it will describe the "best" in autocratic action.

For obvious reasons Figure 13 does not include all of the theory and know-how items which would actually be applied to this job task. It would probably be impossible to include them all because of the differences in abilities in different people. However, the important elements of the job, the theory, and the know-how can be discovered and patterned. There are indications that this kind of work will produce the needed descriptions of competence, and further, that they will be in a usable form.

Keeping in mind all the inferred meanings such as are included in the chemical formula sulfuric acid = H_2SO_4, we are now in a position to define competence. Competence is



This statement should be read thus: Competence results when the job tasks, the appropriate know-how, and the appropriate theory understandings are present, are purposefully engaged, and are interacting to produce the best possible behavior commensurate with the quality of the applied elements.

THE COMPETENCY PATTERN AS AN IDEAL OF BEHAVIOR

As identified earlier, one of the important competence needs revolves around the necessity for a refined concept of competence. What would competence be like under ideal conditions? We have said that the supply and demand of products and services is much better understood because of the law of supply and demand. Electricity is better understood because of the ideal concepts stated in Ohm's law, and many improved understandings from the area of physics are made possible because of the large conceptual laws of Newton and others.

Therefore, in working with the problem of competent behavior it is suggested that the name "Competency Pattern" be used to refer to the ideal concept, which might be thought of as a law of behavior. As is true of many of man's idealized concepts, the notion of the Competency Pattern is not a complicated one. It simply states that a person will be most competent when the tasks he is to do have been clearly identified and defined, when he brings to these tasks an adequate amount of relevant "know-how"—personal equipment in the form of knowledge, skill, methods, tools, and understandings—and when his understandings of these tasks and ways of performing them are the reflection of some larger beliefs and assumptions which are in fact the governing and evaluating basis for all his activities. Thus, the rule (law) of ideal behavior (the Competency Pattern) is nothing more or less than a statement of the factors and relationships which occur in the best kinds of human behavior.

Just as there are an infinite number of applications of the understandings implied by the law of supply and demand, and just as every electrical circuit, with certain additions and modifications, reflects the understandings in Ohm's law, and just as all of the movements within the universe are more adequately visualized because of the concepts of Newton's laws, so all kinds and qualities of human behavior may be better understood and evaluated when viewed in terms of the ideal behavior pictured by the Competency Pattern. That is, there is only one ideal rule of competence and it is given the name "Competency Pattern." However, there are an infinite number of behavior patterns which need to be considered and which will be reflections of this ideal. Further, there are any number of job tasks which need to be described in terms of quality performance. When this is done each of these small patterns may be referred to as a "competency pattern." Clarifying the use of these terms, then: Competency Pattern (capitalized) will be used to identify the concept of an idealized rule or law of competent behavior; competency pattern (lower case) will be used to identify a particularized pattern of behavior designed to represent high-quality performance of some specific well-described and identified job task. It is believed that the Competency Pattern will apply to all kinds of human behavior. However, in a specific job, such as that of the educational administrator, there will be patterns of action which represent competency patterns built upon the conceptual understandings furnished by the Competency Pattern.

SOME IMPLICATIONS OF THE COMPETENCY PATTERN

If the Competency Pattern is accepted, it furnishes tremendous implications for the activity of planning, training, and evaluating for competence. That is, if it is accepted that competent behavior occurs only when the job tasks, the know-how, and the beliefs and assumptions are singularly, and together in relationships, applied to the job at hand, a great deal of change in the way many jobs are accomplished is called for—also a great deal of change in training programs. As a simple example, before a training program can be said to be an effective experience for educational administrators the first step must be to identify what the administrator does. Second, the skills and knowledges (personal equipment) necessary for him to do these things must be identified, and third, the basic beliefs and assumptions upon which the job is to be accomplished must be known. Last, but by no means least, there must be described the many intricate and critical relationships which come about when the know-how, the beliefs, and the job tasks are combined to produce the competent behavior.

One of the important features of the Competency Pattern is the notion that a proposed action may be "run through" the pattern so as to identify its possibilities and its agreement with the basic foundations of the pattern. When designing a bridge the engineer calculates the strengths of the various members according to certain accepted formulas and then applies any modifications he deems necessary to accomplish the desired ends of safety, load, economy, and the like. In the same manner, a proposed action may be "calculated" in terms of the competency formula—the Competency Pattern—and then adjusted to meet the unique features of the particular purpose.

THE INCLUSION OF QUALITY TRAITS AND ABILITY LISTINGS

This procedure for describing competence may appear strange to those accustomed to the time-honored list-of-desirable-traits-or-abilities method. A question may arise regarding the inclusion of traits and abilities in a competency pattern which makes use of value theory, job tasks, and know-how. In such a pattern is there an important place for scholarship, personality, communications skills, and the like?

It is an ideal of science that an improved concept must include all that was valuable in the older notion and in addition must provide more penetrating insights and understandings. A close scrutiny of the workings of the pattern reveals that all the important and valued traits and abilities are indeed included. However, as these operate within the structure of the pattern their true meaning is more nearly shown. That is, the trait or ability is defined according to how it operates in a context of beliefs, actions, and understandings, and not in terms of an isolated and unrelated unity. Thus there is not so wide a gap separating the traits and abilities and the Competency Pattern as a preliminary examination might seem to indicate.

For example, scholarship, one of the important traits usually deemed requisite for teacher success, is included in the pattern in that area designated as "know-how." However, as scholarship is placed in contextual relationship with the other pattern elements, the kind of scholarship desired by the description of competent behavior begins to emerge. Scholarship is very important for the gathering of the facts needed by the problem-solving method. It is also highly necessary to the reëxamination of currently accepted "facts" with an eye to their refinement. But in the light of the value theory of the pattern, scholarship as an end in itself has little validity. That is, as many prominent scientists and scholars admit, knowledge for the sake of knowledge is not a very defensible objective. Purposes, knowledge for human welfare, and the normative question regarding how the knowledge may be used for good or for bad always seem to be present and, in the Competency Pattern at least, provide the directing reins for scholarship.

Thus, like so many of the traits and abilities, scholarship may have various connotations, not all of them consonant with a basic value theory. It is, of course, possible to build logical competency patterns upon other assumptions, in which case variant meanings of scholarship may become defensible. However, it is also logical to require that a teacher have certain basic values and be consistently governed by them. Under this postulate the teacher may not at one time teach scholarship as an end in itself and at another time indicate that scholarship must be guided by purposes and normative understandings.

Additional and similar discussions could be presented regarding each of the other abilities or traits usually deemed important to competence in teaching. However, the consideration of scholarship was presented as an illustration of the usefulness of the Competency Pattern, and to give insights into its conceptual nature. Further use and expansion of the pattern are presented in subsequent chapters.

Another unique feature of the Competency Pattern lies in its departure from the usual assumptions underlying such a study. Monroe describes some studies of traits and their assumptions as follows:

> The lack of satisfactory means of measuring teaching success limits attempts to identify and define abilities, traits, and qualities that contribute to success in teaching. However, several types of studies have been reported: (a) Studies of why teachers fail; (b) compilations of the opinions of pupils; (c) summaries of expert opinion; (d) studies of good and poor teachers; (e) correlation studies of factors related to teaching success.
>
> Underlying such studies there are two assumptions: (a) A given teacher ability, trait, or quality, especially a significant one, affects teaching success in the same direction within broad categories of teaching situations, and to a considerable extent this effect tends to be uniform within a particular category. (b) After the significant abilities, traits, and qualities pertinent to a teaching-situation category have been identified and defined, it will be possible to determine the "trait pattern" of "good teachers" relative to this category. These assumptions have not been verified. In fact there is some evidence suggesting that teaching situations within such a restricted category as eighth-grade social studies vary in significant respects, and that characteristics of a particular situation (e.g. level and distribution of intelligence, pupil attitude toward the school, and equipment) are potent in determining the success of the teacher. . . .[2]

It is important to note that this study of a pattern of competence does not subscribe to the notion, stated in (a), second paragraph of the quotation above, that traits, as usually defined, operate with equal potency in all situations. Instead, it assumes that basic theoretical values serve the function of directing action, but even these important values will not produce consistent behavior without constant and sustained effort by the individual.

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[2] Walter S. Monroe (ed.), *Encyclopedia of Educational Research* (New York: The Macmillan Company, 1950), p. 1448.

This study does accept the idea of "good" behavior patterns. Such a belief is a *sine qua non* of the entire effort. However, as has been shown, the patterning is to be accomplished in terms of basic values, job situations, and needed personal equipment and differs in many ways from a pattern constructed from listings of abilities and/or traits.

CHAPTER 4

The Competency Pattern as an Outgrowth of Modern Understandings

Having presented an abbreviated sketch of the Competency Pattern, we shall now discuss some modern ideas, facts, and assumptions which support it and reinforce its logic. The pattern will emerge as a logical tool to apply to the problem of describing competent behavior and as a logical outgrowth of improved modern understandings regarding the nature of human behavior.

COMPETENCE AS A SPECIFIC, NOT A GENERALITY

One of the understandings pertinent to the problem of competency patterning is that competence is a specific, not a generality. This means that there are too many jobs, too much knowledge, and too many specialized skills contained in a modern society for any one person to aspire to competence in all of them. In part this understanding, of course, reflects the breakdown of the old faculty psychology and its dependence upon the training of universally applicable faculties. It also reflects the realization that a person may be competent in one task and incompetent in another. A logical extension of this idea reveals that the extent of a person's competence cannot be determined by a simple arithmetical averaging of the things he can and cannot do. Would a man who is a competent swimmer but incompetent in riding a bicycle average 50 percent competent? Obviously not; by definition he was a competent swimmer and the average indicated him to be only one-half competent.

Thus, in the light of modern knowledge, competence refers to a specific task performance. A person does not act with the same degree of competence in all the things he does. During a day's activities he will be competent, partially competent, and incompetent, several times.

"CRITICAL TASKS" IN COMPETENCE

The understanding that competence is a specific leads to another important factor. Some specific competences are of greater importance than others. It is not of much consequence if a school principal is incompetent in sharpening a lead pencil; it is of great importance that he be competent in leading his faculty to make group decisions. It matters little if the principal is a competent athlete, but the school will suffer if he does not have sound concepts regarding the aims of the athletic program.

The notion of "critical tasks" says, in effect, that each job contains tasks which are of great importance to the successful overall performance of the job. When the critical tasks are successfully performed, the minor tasks will largely take care of themselves; or, to state the fact inversely, no amount of competence in the minor tasks will produce successful job results if the critical tasks are incompetently dealt with.

The idea of critical tasks is of extreme importance in the development of a technique for producing patterns of competent behavior. It makes the successful patterning of competence a practical as well as theoretical possibility. When it is remembered that competency patterns are dependent upon statements of what people do, and reflection begins to show all the many and varied things a professional man, such as the school administrator, does, the most logical theoretical behavior pattern tends to be lost in a maze of minute and petty details. Therefore, it is a very practical relief to discover the relative nature of the various activities in a job, and to recognize that competence may be described by the use of the important or critical tasks. In this way the work of making competency patterns is relieved of much of the time-consuming detail which would otherwise have to be included.

COMPETENCE NOT INDEPENDENT OF OBSERVABLE BEHAVIOR

The statement "Competency does not exist independently of observable behavior" is an assumption and not a demonstrated fact. It can never be proved that a person is not a competent automobile mechanic just because no one has ever seen him repair a car or observed a car that he has fixed. But whether or not the assumption is open to positive proof, it provides a valuable and constructive basis for examining descriptions of competence. In the first place, our concept of competence has no mystical elements. By definition, competence represents behavior of a desired type and quality, and this behavior, or its direct results, may be readily observed. This is necessary to place competence upon an experiential basis. When competence considerations are removed from such a basis little objective and/or productive work can be done with them. Data sources become unstable and the data do not permit verification. Descriptions of competence degenerate into opinions of the various "authorities" and "experts" regarding abstract "human qualities."

SOCIAL CONTEXT OF INDIVIDUAL COMPETENCE

The notion that competence is a function of observable behavior becomes increasingly logical when one considers that competence is valid only in a social context. Individual competence has no meaning when considered apart from the competences of others. It is a relative qualitative and quantitative assessment of an individual's performance of his portion of the community's tasks, and therefore a consideration of the social matrix is germane to it.

The importance of the social context in any consideration of competence is a result of the increasing complexity of modern society. As society moves in the direction of more coöperative and interdependent action, two important and evolving aspects of competence may be observed. First is the trend toward increasingly minute divisions of labor, which causes each individual to specialize in the efficient performance of his highly particularized tasks. Second, this high degree of specialization tends to cause the worker to lose sight of the overall aims of the group and the exact manner in which his contribution aids in their achievement. Thus the specialization is likely to create stresses which may disrupt the smooth functioning of the society.

It seems, then, that competence should be a dual affair. There will be competence in performing a specialized set of tasks and there will be in each specialized member the general competence needed to participate in the society-wide tasks of developing commonly accepted values, purposes, and goals.

PREDICTIONS OF COMPETENCE ON BASIS OF PAST ACTIONS

Estimates of competence in future task performance are made more realistic by the assumption that competence cannot be separated from behavior. From this assumption it follows that predictions of future behavior must be based upon data gathered from past actions. These data will be concerned with the nature of the tasks performed, the manner of performance, and the results accomplished. Further, the data must not only indicate the patterns of behavior but also give evidence as to whether or not these patterns are flexible enough to transfer to future similar tasks.

ORGANISMIC QUALITIES OF COMPETENCE

The organismic concept recognizes that there are many highly complex things (e.g., competence) wherein the elements or parts are so integrated, so mutually dependent, that the relation of one element to another is governed by the relation of all to the total organism. This fact reveals why it is not possible to describe competence simply by listing the elements. Such a list no more portrays competence than a list of building materials describes a house. Describing part relationships is as important as listing and describing the parts. A blueprint shows the relationships of the various parts of the house. Competency patterns appear to be the most appropriate way of showing the relationships of the elements of competent human behavior. Our concern is therefore with the total human organism as it acts and reacts within a specified situation—the performance of a job or job task.

Acceptance of the organismic concept may give the impression that the total organism is the important thing and little of value can come from the identification and study of its component parts. Such an impression is not entirely correct. Although competence is a product of the total organism, there is nothing in the organismic concept which suggests that behavior elements cannot profitably be examined. Actually the organismic notion requires a more rigorous study of the components than might be appropriate with other concepts. Under an atomistic philosophy, for example, competence would be considered as simply a sum of its parts and could be adequately portrayed by nothing more than a listing and description of the elements.

Thus, in terms of modern organismic understandings, not only must the elements of competence be listed and described but their interrelationships need to be shown. It is in the latter area, the showing of relationships, that misunderstandings may arise. The organismic concept promotes examination of elements and parts. However, it insists that the parts must be related to the whole, and not left as though they were self-sufficient entities, because only by relating the part to the whole can the true significance and function of the part be ascertained. For example, the elements of a football player's competence may be found in his physical equipment, knowledge of the game, attitudes, skill in running, blocking, and so on. The coach understands that isolated proficiency in each of these various abilities does not necessarily mean competence in playing football. True competence emerges as the plays of the game (situations) occur and the various elements integrate to produce behavior appropriate thereto.

RESISTANCE OF THE COMPETENCY PATTERN TO ENTROPY

The physical sciences have shown that a closed energy system tends to "run down" (gets into a state of entropy). If isolated from the recombinations and exercises of new experiences competence will become disorganized and inert.

This explains what happens when a professor of educational administration comes into college teaching fresh from the field and full of experiences but after going into teaching has no more meaningful experiences. His original competence becomes a closed system and as such is subject to entropy. What was once competent teaching ceases to be.

The Competency Pattern works to prevent "closed system" competences with the resulting possibility of entropy. By insisting on the intake of new and improved knowledges, by constantly calling for the formulation of new and more adequate hypotheses, and by demanding that each action reflect the consistent application of values, the Competency Pattern refuses to let any segment of the individual's behavior pattern become isolated and subject to arrested development. The total organismic organization of the individual is strengthened.

IMPROVEMENT OF COMPETENCE THROUGH ATTENTION TO THEORY

One of the assumptions which serve to bolster the logic of the Competency Pattern and to furnish some insights into its reason for being is that modern behavior could be vastly improved if more attention were paid to its theoretical basis. The beliefs fundamental to many of our actions are handed down from generation to generation and become so thoroughly accepted as part of the culture that one seldom takes time to examine them. Further, they have become so ingrained in the daily way of acting of the social group that they are looked upon as eternal truths. Naturally from this viewpoint they could not be evaluated or examined; they could only be accepted. However, when it is realized that these "truths" are actually assumptions, beliefs, and hypotheses, the problem is seen in a new light. Assumptions, beliefs, and hypotheses need to be examined, refined, and brought up to date just as do skills, knowledges, methods, and purposes.

As has been shown previously, the theory side is an important facet of the Competency Pattern. The pattern tends to foster a more intelligent use of consistent and logical theory as a directing force for quality behavior.

REFINEMENT OF OPERATIONAL THEORIES

Many modern operational theories need to be clarified and refined so as to reflect modern living conditions. Intermingled throughout the cultural patterns are a variety of different theories regarding the "competent life." Upon careful observation and analysis it is found that many of these theories are contradictory; that is, if followed as guides to behavior they would lead to differing ways of living and acting. One theory would use one method of problem solving; another would use a different method. Some theories would accept certain facts; others would reject them.

At this juncture we do not intend to recommend or to defend any particular theory as a basis for conduct. The aim here is to point out the fallacy in using many differing theories. Perhaps one of the more basic of all assumptions is that "a person should be consistent in his selection and use of assumptions." This does not mean that once an assumption is chosen as a directing basis for behavior it is then and there frozen, never to be changed or modified. It does mean that, as long as the assumption is accepted, all areas of behavior should come under its influence, and as new facts and experiences cause it to be modified, it should in turn modify the behavior in all areas.

Competent behavior, therefore, will call for a reëxamination and reëvaluation of the many relevant ideas, and an alignment of theory so as to eliminate its contradictory elements. This is one of the tasks for which the Competency Pattern was designed.

CONSISTENT BEHAVIOR

This discussion of assumptions leads directly into the examination of another and very important postulate included in the Competency Pattern concept. It has to do with the desirability of consistent behavior. Competent behavior must needs reflect the use of identical, or at least compatible, basic assumptions in all of the various activities in which the individual engages. The person using the democratic concept in his home life would also use it in his business affairs, in his recreational activities, in his political operations—in all the actions which make up his daily routine. Inversely, the autocratic individual would display autocratic behavior in all his dealings.

Belief in the value of *consistent* behavior is an assumption, but a widely accepted one, and is being declared more valid day by day. The time has about passed when an individual is expected to play one kind of role in his business affairs, another at home, a third when dealing with his associates in a social setting, and a fourth when participating in religious matters. The old saw "When in Rome do as the Romans do" is no longer valid when it comes to the basic values. Few people will admit that education can do nothing about the rules and values of living. Indeed, many agree that it is the business of education to examine and study the rules and values with the intent of improving them. This is in contrast to a one-time viewpoint which declared that it was the business of education to teach people to play the game well regardless of the rules.

OPERATIONAL BELIEFS

One of the important assumptions of this writing is that beliefs do not mean anything unless they make an observable difference in an individual's behavior. In this section we shall discuss what may be called "operational" beliefs—the beliefs which may be deduced from seeing a person in action. Naturally such observation is not simply a generalized perception of all the things the person does. Much human behavior is carried on at the habit level and goes along pretty much the same from day to day. The observation to determine operational beliefs must be selective. It will try to gather behavioral data from critical or crucial situations which periodically arise (e.g., taking a stand on a controversial issue). The aim is to observe the person "when the chips are down" because that is precisely the occasion when his real beliefs, if he has any, will be most evident. Thence, from observing what he does, and from hearing the reasons he gives for doing it, one can infer quite clearly the beliefs which govern his actions.

Some operational beliefs are nothing more than a passive following of the beliefs of a stronger individual who is being copied. However, it will be observed that the better kinds of operational beliefs are possessed by those persons who have done some thinking about them. They have intellectualized their position in terms of operational beliefs, they know quite well what it is that they believe, and they are rather consistent in directing their actions according to these beliefs. Thus, operational beliefs do not work for the acceptance of any political or social scheme, be it democracy, communism, fascism, or whatever. But they make a difference in the way an individual acts and thus are the important beliefs. They are the needed kinds of beliefs because they are consistent, they direct behavior, they require intellectualization and reflective thinking, and they provide an all-important point of view from which the individual can evaluate and project the consequences of actions either real or proposed.

INTELLIGENT ACTION

It is another important postulate that "to act with the highest possible degree of intelligence" should be a primary human value. Although accorded a great deal of lip service, this value is seldom observed to be truly functional. So much human action takes place because of social pressures, a desire for prestige, an effort to keep up with the neighbors, or simply whim or fancy that it is difficult to discover any real intelligence actually at work. Nevertheless, intelligent behavior is an important value. As used herein it means that a specific act is based upon the best information, the most adequate hypotheses, and the most consistent theory of which the individual is capable. Or, to put it inversely, after an action is completed, if it can be shown that he made a logical choice as to a plan of action, used the best facts and skills at his command, and acted consistently in terms of his basic value theory, he may be judged to have acted with intelligence.

The entire idea of competence is based upon the acceptance of intelligent action as the desirable kind of action. Without this acceptance the Competency Pattern fails completely in its function. This "intelligence" is a particular kind of intelligence. It bases its actions upon a course of behavior parallel to that of the scientific method and reflects a belief in the validity and quality of the scientific method. Thus unthinking kinds of behavior based on authority, the "accepted" way, "social custom," or behavior patterns which reject the problem-solving method are ruled out.

With these things in mind, it is appropriate to say that competence exhibits performance levels which are directly proportional to the amount of reflective thinking required. That is, the important kinds of competences—"important" in terms of the assumptions underlying this discussion—are those which require reflective thinking. This is in no way to assert that habits and other non-reflective skills and behaviors are not important. But the primary concern is with behavior that requires, or should require, thinking as an indispensable adjunct.

One might note that a great deal of effort is expended in telling people to "think." But how does an individual *think?* The process is not completely understood and is difficult to describe. In this connection, the Competency Pattern will furnish a procedure which will bring about this desirable action known as "thinking." The Competency Pattern interactions reflect a "thinking" way of behavior and in so doing portray the improved quality gained by an increased use of human intelligence.

TRANSFER OF TRAINING

As a device designed to improve the general intelligence level of human behavior the Competency Pattern needs to make effective use of the transfer of training. This has been pictured in many ways. Training has at one time or another been thought to transfer through the universal applicability of the faculties of the mind, through the universal applicability of knowledge stored in the apperceptive masses, and through the identical elements of the atomistic concept of learning. Each of these concepts has been shown to be largely ineffective.

Modern understandings show that transfer of training is more nearly possible in the larger procedures and undertsandings of the method of reflective thinking. That is, the more important problem-solving methods are universally applicable and can be taught in such a way as to enable the learner to apply them to numerous areas of problem-solving activity.

As a method for bringing the problem-solving method into action in the various generalized areas of living, the Competency Pattern aids in the "transfer" of the method of reflective thinking to all fields of endeavor.

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PART II

FOUNDATIONS OF THE COMPETENCY PATTERN

CHAPTER 5

The Role of Philosophy in Developing the Competency Pattern

Part I of this book has dealt in a general way with the notion of competence and the Competency Pattern. Some selected ideas and understandings about competence pointed up its important, even imperative, nature and its implications for modern living. It is the purpose of Part II to present a more thorough philosophical and psychological justification of the Competency Pattern.

NORMATIVE PROBLEMS

Since competence is so completely bound up in living and acting in the "right" way, clearly that "right" way will depend upon a particular point of view, which will provide an entree into one of the important problems of competent behavior and will establish a referential basis for further examinations regarding competence.

From earliest times the notion of competence has been inextricably interwoven with ideas concerning what constitutes proper and high-quality behavior. Persons displaying such behavior were accorded positions of leadership and power. The tribal chieftain became chief because of his competence in those activities considered important to the members of the tribe. In the earlier tribes he was doubtless the "best" man in the group. Later, with the development of a wider scope of activities, it was recognized that a person might possess great competence in a somewhat limited area of work. Then came the division of labor, with groups of specialized tasks being assigned to various members. The medicine man had his job to do, the weapons maker, the warrior, the chief, and so on to include all the jobs recognized by the tribe. Each member held his position on the basis of his personal competence. He performed his job according to tribal customs and there was little question as to whether his way was the right way.

With the formation of more complex societies, and with the increased intermingling of peoples from tribes with differing cultural mores, men began to recognize that there were many different ways of doing the same task. The "right" way depended upon the point of view. Also, conflicts were seen to exist within the customs of the individual community. Why was it "right" to kill a member of a neighboring community but wrong to kill one's brother? Why was it wrong to steal your neighbor's horse but all right to take it through smart trading?

These conflicts naturally led to a search for the important principles of human behavior. If the "right" way of performing various tasks was a relative matter and depended upon a point of view, then there must be a "right" point of view which, when found, would imply the correct methods of doing the task. These kinds of considerations, of course, represent the beginnings of that area of study and thought we now know as philosophy.

Whether or not the above is a factual description of the beginnings of philosophy does not greatly matter. The important fact is to be found in the close interrelatedness of point of view and competence, and in the recognition of philosophical concepts as integral and functioning parts of any consideration of the nature of competence. Without philosophical concepts it is impossible to construct a defensible competency pattern of any kind. It might be possible to describe what the competent man does, but without a philosophical point of view it will be impossible to say how he does these things and, perhaps of more importance, why. Furthermore, differing sets of philosophical concepts will obviously produce radically differing competency patterns. Rigid concepts will serve to make the behavior patterns rigid, autocratic concepts will define autocratic systems, and democratic concepts will describe competence within the democratic social organization.

THE NATURE OF HUMAN CONCEPTS

The notion of concepts is so widely accepted that one seldom reflects on the nature of a concept and the true significance of its function. A perfunctory examination reveals considerable agreement—when a person "gets the idea," "sees through," "understands," "gets the point," "thinks the problem through," he becomes the possessor of a concept. A more thorough study, however, shows the above to be too simple an explanation. What happens when a person "gets the idea" or "thinks through a problem"? These expressions really refer to a *process* whereby we are able to integrate perceptions into a meaningful pattern. It is the way in which discrete bits of sense perception are made into a continuous whole. This is as true in a simple concept—a knife, for example—as it is of larger abstract notions such as the theory of relativity. Sense impressions are, at best, only fleeting and fragmentary stimuli, while objects such as houses, and even such nonmaterial things as theories, have a stable and continuous quality.

Thus, concepts are ways of putting together bits of data to produce the notion of a thing possesing certain qualities. However, concepts are not mere haphazard lumpings of perceptual data. The reverse is true; they are constructed according to rules. These "rules" cause concepts to be formed around the persistent and recurring qualities and to tend to slur over the transient and nonrecurring factors. In a sense concepts are also rules themselves. New concepts grow from and build upon concepts already possessed. In that manner the new concept is an extension of the old and is governed in varying degrees by the old.

An illustration may clarify this idea. Almost everyone has some kind of concept regarding a knife. It will be agreed that the individual concept is composed of data from past experiences with knives and of real and imagined uses for knives. It will also be admitted that "knife" represents a class of things, large, small, folding for the pocket, bayonet for the end of a gun, and so on. However, it may not be recognized that the concept enables the individual to project the possibility of future experiences with knives, and in fact gives the symbol "knife" whatever meaning it may hold for that person. It represents his knowledge of knives and makes it impossible for him to state this knowledge in any terms other than his concept. Thus, concepts provide the rules for gaining knowledge and also for passing knowledge on to others. This makes the notion of concepts most important in any discussion having to do with competent behavior—what it is, how it is acquired, and what kinds of training programs will facilitate its acquisition.

PHILOSOPHICAL TROUBLE WITH CONCEPTS

The above discussion of concepts represents a philosophical point of view. It implies the nature of human knowledge and how such knowledge is developed and transmitted from one person to another. Further implied is the notion that the task of philosophy lies in taking available facts, as if they were pieces of a jigsaw puzzle, and fitting them together so as to form a satisfactory picture of man and the universe within which he lives. Naturally such a picture will need to include a definition of competence and the kinds of behavior appropriate to the "good" life. Also, since some of the needed facts will be missing, the task of philosophy is to make logical deductions so as to interpolate for the missing items and thus present a "total" picture. This must be done, however, with the constant expectation that new facts may, and probably will, come to light and require revisions in the portrait.

Not all philosophies will agree with this idea of the concept as a flexible, growing, somewhat personalized method of deriving meaning from masses of discrete bits of perceptual data, or with the assertion that these meanings constitute the only source of human knowledge. Although adherents to some of the more highly formalized "schools" of philosophy may be outraged, for the purpose of clarifying the basic assumptions of this discussion it is not out of order to form some rather broad categories of philosophical viewpoints and to examine each in terms of its postulates regarding concepts. In turn, these postulates will reveal the nature of competence and throw light upon the kind of "good" life necessary to fulfill that particular philosophical viewpoint.

Three general philosophical categories—idealism, realism, and pragmatism—will be adequate for this examination. *Idealism* includes all theories which regard reality and "knowing" as essentially spiritual or the embodiment of mind or pure reason. *Realism* includes those theories which hold that reality exists independently of the mind, or "knower," and that these universal laws or realities can be discovered through scientific study. *Pragmatism* denotes those theories which hold that the meaning of ideas is to be sought in their practical bearings, and that truth is preëminently to be tested by the practical consequences of belief. Each of these categories of philosophical thought offers different ideas regarding the nature and source of knowledge. Naturally, therefore, each will present different views about the nature of concepts and different concepts regarding appropriate or competent human behavior. Realism will be considered first.

REALISM

Realism holds that a concept is a "copy" of the thing it represents. Early man undoubtedly thought that his concepts were actual copies of the realities he observed about him. Could he not remember what his spear looked like even after he had lost it during a hunting expedition, and did he not have a mental picture of his dog even when the animal was away chasing rabbits? The ideas in his mind must indeed be facsimiles of the actual objects he had seen, felt, and observed. To be sure, this was a naïve realism, but it sufficed for the understandings then available. Primitive man may have wondered why his concepts persisted even after the objects they represented had been destroyed by death, fire, or accident, but it is doubtful that he achieved any real understanding along this line.

The invention and development of language brought forth improved concepts which reached beyond individual items and encompassed classes of things. The concept of "dog" represented not only a particular dog but a whole class of animals as well. It was also noticed that certain events seemed to happen in recurring patterns. This led to the concept of natural laws. However, in line with the notion that a concept represents a copy or duplicate, it was erroneously believed that the mental picture represented a real and eternal law—the unchanging basis of change. This gave the realist no end of trouble because the objects and things he observed never quite obeyed the laws he had discovered. For example, Newton's law of gravitation was a real and unchanging law of the universe, but for some reason the planet Mercury refused to recognize this law and continued to act in its own erratic way.

During the Middle Ages realism lost much of its popularity and the major part of philosophical thought was given over to the "other world" concepts of idealism. However, with the advent of science and its techniques for finding truth, realism was revitalized. In the scientific method the realist was sure he had found the right procedure for discovering the eternal natural laws of the universe. There is no doubt that the use of the scientific method has proved a very fruitful activity. It has enabled mankind to successfully attack some of the most pressing problems of living. However, as a revealer of the eternal laws of the universe, the scientific method has not lived up to the expectations of the realists. Newtonian laws proved inadequate and had to be replaced by the improved concepts of Einstein. Physical science has valid evidence that light is composed of particles; it has equally valid evidence that light is composed of waves, and is searching for a "law" which will explain this apparently impossible situation.

It is evident that this difficulty in searching for eternal natural laws results from a misunderstanding of the nature of human concepts. Concepts and "natural laws" do not contain any essences of unchanging reality. They are instead methods and rules for understanding the multitudes of facts which constitute human experience. In other words, they are ways in which we extract some meaning from all these facts and use it to predict and understand other facts and experiences. The larger concepts, which are by way of being "laws," are nothing more than an effort to integrate a wider range of facts, with the avowed ambition of integrating all knowledge under one grand concept or law.

REALISM AND COMPETENCE

As an area dealing with philosophic concepts the view of realism will naturally include some ideas about competence. However, it should be recalled that to the realist a hypothesis is nothing more than a stopgap device—something to use as a base of operations until the "real law" is discovered and verified. Thus, realism acknowledges the existence of an essence of competence, which must be identified. To state the matter in another way, there exist comprehensive and unchanging natural laws which govern competent behavior, and the first job is to find these "first principles" of competence. When they have been identified it will be a simple matter to describe competent behavior. For example, if it is determined that the laws of health require each person to have exactly eight hours of sleep per day, then to exhibit competent behavior regarding matters of health one will have to arrange his daily schedule so as to include eight hours of sleep. If it is determined that a business executive should, by natural law, have six subordinates reporting to him, then business firms will have to be organized accordingly.

Much has been heard about the "round peg in the square hole"—the person trying to do a job for which he is not fitted. However, from this simple observation some rather sweeping conclusions have been drawn. Since some people appear to be in jobs for which they are suited and wherein they are happy, productive citizens, and others occupy positions for which they are not suited, in which they cannot perform effectively, and which cause dissatisfactions and even unsocial behavior, it was concluded that each person is "born" to do a particular and discrete job.

In this situation the task of science is to find out the particular job each child is "born to do." The schools and other training agencies will then prepare him for this job, the employment agencies will place him in the job, and he will proceed to live a happy, productive life.

This presents a rather attractive picture—everyone doing the thing he was destined, by natural law, to do. However, under closer examination some of the attractiveness fades. First, the system prescribes a very rigid, almost robot-like, existence. Man will no longer have the right to choose his vocation. This will be determined by the natural laws and the accident of his birth. His capacities, as revealed by scientific testing, will determine the job he is to be prepared to fill. Second, there will no longer be any changes in the number and types of available jobs since these too will be defined by the unchanging natural law. Indeed, the millennium will be at hand.

Obviously, in the light of modern understandings, the above represents an untenable position. It leaves out such important facts as the flexible and dynamic character of man, the human capacity for thinking and self-direction, and the evolving nature of the universe. Further, it assumes the existence of unchanging universal laws when no one has yet been able to apprehend a single one of these immutable laws. Whenever we think we have one tied down so that it "really" is unchanging someone always comes along and shows that it is actually inadequate to portray the facts and requires some revision. Then, too, if we carry these deterministic notions to a logical conclusion we will have to admit that many of the unsocial unfortunates locked up in our penal institutions are there through no fault of their own or of society. They are there simply because they were born to do jobs that have not yet been invented. Surely a number of these people turned to crime because they were born to be television service men but were so unfortunate as to come into the world before the advent of television. Others undoubtedly turned to a life of crime because they were destined to be space pilots and were unable to find employment in the jobs for which they were "naturally" suited.

Thus competence, as seen through the eyes of the realist, is a rigid and prescribed routine. It cannot be called a pattern of behavior because "pattern" represents a dynamic kind of life situation. Human actions in a pattern are based upon past experiences but retain the flexibility needed to deal with the unique features of each new experience. However, as the realist discovers more and more of the natural laws, a point will be reached where change is no longer possible or necessary. Appropriate behavior can then be described in minute detail. New experiences will no longer contain unique elements because all possible elements will have been discovered and subsumed under natural laws. This situation can be aptly illustrated by the misplaced educational objective of having every fifth-grade student in the entire nation engaged in an identical activity at nine o'clock on the second Monday morning in January.

IDEALISM

Idealism started out the way realism did—as an effort to integrate human experiences into some sort of understandable and continuous whole. This is a natural attempt because experience, in its broad sense, is the only source from which understandings may be developed. Be the experience an item of revelation, of pure reason, or of scientific demonstration, it remains a human experience and constitutes the stuff from which concepts are made.

Experience which transcends human experience is a meaningless and nonsensical notion made possible only through the human ability to play with words.

Starting out by integrating experiences into concepts or understandings, the idealists, like the realists, soon noticed discrepancies between their concepts and the overflowing stream of experience. Some experiences would not fit into appropriate conceptual categories. There were always nonconforming experiences. Naturally this condition caused concern. Which was right, and therefore "real," the concept or the experience? Obviously, or so it was thought, both the conceptual rule and the contrary experience could not be correct. A choice had to be made.

The idealist chose the concept as being the real, true, and unchanging essence and relegated unruly experiences to the realm of imperfection. To say that reality was not of this imperfect world but existed in a perfect and nonmaterial world of ideas was a bold move, but after a bit of postulating, the idealist came through with flying colors. In order to explain his ability to notice the imperfections of this world he had to postulate another and perfect world. This "other world" was a place of perfection, and, since the trouble with this world seemed to lie not in imperfect ideas but in the imperfection of material things, the perfect "other world" was a nonmaterial place composed entirely of perfect ideas. To establish a connection with this other world, it was further postulated that the mind, a nonmaterial entity, came from the "other world of perfect ideas" to enter into the body at the time of its birth.

These postulates created a very beautiful system and at the same time an easily defended philosophical point of view. Questions about those experiences which did not conform to the eternal concepts were no longer troublesome. After all, one would not expect the experiences of this imperfect world to correspond exactly with the concepts which came from a place of nonmaterial perfection. Also, proof, as we now understand proof, of the validity of the various concepts was not required. To try to prove the validity of an eternal concept through the use of earthly material things would be illogical, to say the least. The only proof needed could be had through pure reason (work done by the nonmaterial mind) and through the logic of dialectics.

MORE TROUBLE WITH RIGID CONCEPTS

It is immediately seen that dealing with perfect ideas or concepts logically gives rise to a rigid system. Moreover, the system tends to become more and more rigid as time passes. Each time the human mind is able to grasp one of the eternal concepts, and this concept is added to the store of knowledge, further examination and reasoning about the idea are not needed and would even be out of order. There remains only the problem of applying the concept to the affairs of this world. For if the concepts are really unchanging essences of reality they will not change and nothing can be done to bring about a modification. In other words, the rules are eternal, and it is the function of man to play the game according to the rules. If things do not go right it is obviously not the fault of the rules but because imperfect man is not correctly following their dictates. As more and more of these eternal concepts are gathered together the time will come when man has all the rules necessary to live the "perfect" life. No further change is then needed or will be possible.

Many difficulties have arisen regarding these real and eternal concepts and man's ability to grasp them. It seems that two persons thinking about the same problem may come up with two entirely different and contradictory eternal truths. Such was the case when some thought the earth was flat and others believed it to be round. To be sure, both could not be right, but the difficulty lay in picking out those persons who could grasp the "real" truths. Perhaps the earth "really" is flat, but because it is made out of imperfect material stuff it does not follow the "real" concept and acts like a sphere. However, this kind of difficulty is found not only in the case of material objects which refuse to follow "eternal" concepts but also in the case of the concepts themselves. For a long time Euclidian geometry was thought to be an outstanding example of man's ability to grasp an unchanging truth. But to the dismay of the idealists it has been shown that there can be many geometries just as valid as that of Euclid and each one gives different "answers."

From the idealists' point of view this kind of difficulty can mean but one thing. Some people are able to grasp the "real" concepts while others bring forth "false" ideas. This theory leads directly to the establishment of authorities. Those views which have stood the test of time become the accepted ones. For this reason ancient writings have a particular value, and the test of a truth is not found in experimental verification but in how well it conforms with the opinions of these accredited authorities.

Thus, to the idealist competence is a real and eternal idea. Through pure reason, and revelation, the mind of man has gotten this idea regarding behavior. Further, competence means a desired degree of human observance regarding the other real truths pertaining to the "right" way of acting. Competence could hardly mean anything else because the idealist will countenance no tampering with the rules he has accepted upon the basis of "authority." The rules of behavior are already known and perfect; the problem comes in trying to get stubborn man to obey and follow them.

THE REASON FOR THESE DIFFICULTIES

At this point it should be evident that the reason for these difficulties lies in the notion that concepts are eternal in their own right. The realist sees an eternal essence in the natural laws of the universe. The idealist presents eternal truths from another "world." In either case the results are rigid rules and "laws" which, because of their "real" nature, cannot permit modification. Next, the ever increasing store of human experiences brings to light facts which the rules do not explain or even contradict. A fight ensues between the rule and the new facts. Often the old rule is overthrown; however, it can only be replaced by another rule just as rigid. If new facts come to light which challenge this new rule another battle is joined. The process is reminiscent of the revolutions which have always characterized autocratic systems of government. A rigid ruler is overthrown, to be replaced by another ruler just as rigid.

In this connection a very insidious situation, the compartmentalization of rules, may result. This refers to the well-known human failing of using different and contradictory rules of behavior as the basis of conduct. We use certain rules as a base in business dealings; these are retired, however, when we get home and a different group of rules is brought into play. So it is with the various "roles" a person plays—rules for business, rules for the home, rules for associating with friends, rules for the highway, rules for Sunday, and rules for weekdays. To say the least, this represents an inconsistent way of living, but it represents an easily observed human capacity, and one that militates against competence in its truest and most consistent sense.

As in the case of the revolution of governments, this revolution of eternal rules and laws is detrimental to human progress; it causes stagnation. Energy is wasted in fighting over the "reality" of rules which could have been expended more wisely in attacking the problems of living.

It is apparent that this wasteful process of revolution should be replaced by the peaceful and more productive process of evolution. This can easily be done when we recognize that concepts, rules, and laws are man-made devices for gaining a better understanding of experience; they are not eternal realities that are somehow structured into the universe. When this understanding is accepted, it is not at all difficult to conceive of concepts or laws which explain the facts of human experience in a satisfactory manner yet maintain the flexibility, and retain the possibility of modification, necessary for them to evolve and improve as new facts are provided from experience. Concepts are growing and expanding devices.

The development of one opens up vistas leading to others, and so on in a never ending expansion of human understanding. This, of course, does not mean that one concept is just as good as another. The validity of a concept will be determined by its success in bringing meaning to the facts of experience. Newton's laws were true because they brought about an integrated understanding of many facts of experience. Einstein's laws of relativity are true because they will make possible an integration of all the facts explained by Newtonian laws plus other bodies of facts which Newton could not include in his concepts.

PRAGMATISM

The third philosophic category is pragmatism. Pragmatism holds that the meaning of a concept is to be sought in its practical bearings, and the truth of a concept is to be tested preëminently by the practical consequences of action based upon the concept. That is, the meaning of a concept is to be found in the degree to which it assists in improving understanding, and the validity of the concept is determined by the results of behavior based upon the new understanding.

In this connection, it is important to note that pragmatism does not take much stock in the idea that man can really know a great deal about "the unchanging bases of the universe," "ultimate reality," "pure, perfect, and true ideas," "eternal laws," "the essence of reality," and such things. But at the same time pragmatism places great faith in the uniqueness of the human organism and in its ability to see relationships, solve problems, and learn from experience. Thus a basic postulate of pragmatism is that man actually understands only those concepts that he has created out of the experiences of himself and others. These concepts may or may not be true, and only through testing, in actual usage, to integrate facts, produce relationships, and guide human behavior, will their "validity" be known.

Compared to the systems of idealism and realism, pragmatism may appear somewhat insipid and weak. After all, realism offers the "immutable laws of the universe," and idealism promises "eternal truths from the non-materialistic realm of the mind." Pragmatism presents nothing more than a faith in the uniqueness of man, and in his ability to construct integrating concepts aimed at bringing meanings from his experiences.

This apparent weakness in pragmatism, however, disappears when the ideas are put to use in the guidance of human affairs. What appeared to be a weakness is actually revealed as a great strength. First, pragmatism permits an increased amount of real freedom. New ideas and facts are cherished because they may provide increased or improved understandings. These new notions are given full freedom to compete with, and possibly replace, the old. This could not be the case under either idealism or realism because these "systems" require all new ideas to be carefully weighed against the existing "immutable laws" and "eternal truths." If there is any conflict the new idea must be destroyed; it is obviously false.

Second, pragmatism makes possible an entirely new point of view regarding the nature of understanding. To use a descriptive term, pragmatism provides an "open end" concept of knowledge as contrasted to the "closed end" concept of idealism or realism.

Figure 14 attempts a diagrammatical portrayal of this idea. Part *A* depicts the idealist or realist concept of knowing. The totality of knowledge is represented by the outline of the pyramid. The partially constructed pyramid indicates the amount of real knowledge man has acquired to date. It is easily seen that the pyramid is moving toward completion—the achievement of complete knowledge. When it is done all the knowledge of the universe will have been assembled in perfect and final form, whether the pyramid is constructed from the eternal and spiritual truths of idealism or from the immutable natural laws of realism. This is the meaning of a "closed end" system. Each added truth brings the

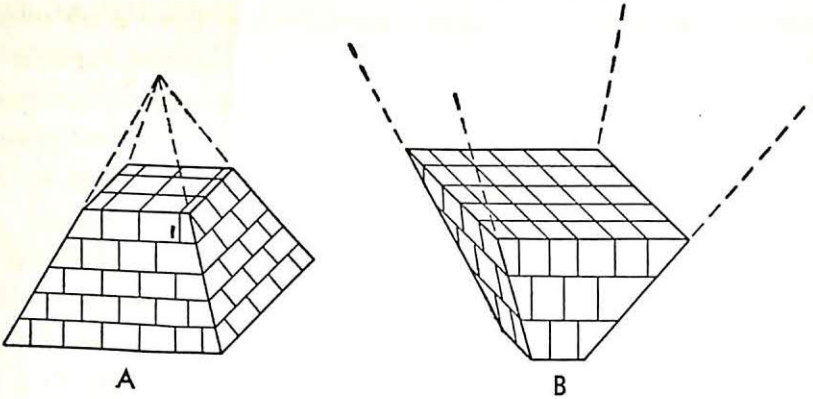

FIGURE 14. "Closed End" and "Open End" Concepts of Knowledge.

structure closer and closer to final completion and leaves less and less to be learned, until finally nothing remains; all is known; knowledge is complete.

It is also evident that this pyramid is to be constructed of nothing less than absolute truths. No partial truths, guesses, or hypotheses may be admitted because they would destroy the entire structure. This is why the idealist and realist must look with distrust upon any new item of knowledge or any novel theory. The new material must first be shown to be compatible with the known truths of the system; validity ascertained by experimental testing is secondary.

Part *B* of Figure 14 shows the "open end" system according to pragmatic notions of knowledge. Here the lines, instead of converging toward a finial point, diverge into infinity. Pragmatically speaking, each new discovery opens new avenues of investigation, and every investigation, fruitfully consummated, provides new possibilities for learning.

This is aptly illustrated by the scientific investigations of the nature of matter. It was discovered that all things are made up of tiny particles—the atoms. This discovery made possible studies which revealed that the atom itself is composed of particles. Further, to date it has been learned that at least some of these particles are built from smaller particles, and there is no reason to assume that these particles of particles are not capable of division. Thus it progresses; learning begets learning, *ad infinitum*.

Exclusive of the difference of "open end-ness" and "closed end-ness," there is another dissimilarity worthy of consideration. As was mentioned above, the "closed end" system can accept no knowledge that is not a perfect and eternal law or truth, lest it prejudice the entire concept. Also, all included knowledge must be consistent in the highest degree, because real truths could not possibly be in disagreement. However, in the "open end" view of knowledge such is not the case. Here the progress is, admittedly, from imperfect knowing toward more nearly perfect concepts, a perfect concept being one that explains all the available facts and has no relation to the "ultimate nature of reality" as such.

Thus the "open end" system, Figure 14 Part *B*, illustrates not only the growth of knowledge but also the quality of that knowledge. The items at the base of Part *B* represent concepts which were of poor quality by present-day standards. However, they provided the foundation for the learning which made possible our modern understandings. Therefore, each layer in the figure represents increased learning and improved quality of concepts. The top layer represents understandings and concepts which are the best available at present, but which will in the future provide the base upon which the understandings of another era will be erected. From this it is seen that pragmatic knowledge must be serviceable but does not have to be perfect. Errors may be, and indeed are, included in our learnings. However, the continual experimental testing of the "open end" system tends to weed out gross errors, refine the knowledge, and make it more adequate. Few of us have ever owned a "perfect" automobile, but we get a lot of service from the imperfect vehicles we do own, and we expect improved versions to emerge from the constant testing being applied to current models.

PRAGMATIC CONCEPT OF COMPETENCE

Idealism and realism regarded competence as strict observance of rigid laws and truths. As might be expected from the gist of the previous discussion, competence is a different fabric when observed from the viewpoint of pragmatism. It refers to a quality of behavior, and not to any perfect behavior. The quality is, in each case, determined by the activity. A competent explosives expert *never* drops a bottle of nitroglycerine. A competent druggist may occasionally drop a bottle of chemicals.

Pragmatic thinking has always insisted that the meaning of an idea is to be discovered from the application of the idea to practical situations. Thus, competence is not a real and perfect idea from the other world of perfect ideas (idealism); nor is it an eternal and real law discovered through objective study (realism); it is nothing more than an abstraction derived from that sum of human experience which represents man's efforts at successful problem solving. From the pragmatic point of view competence represents a certain degree of progress toward a goal by means of successfully dealing with intervening problems.

CHAPTER 6

Competence and Psychology

Since that remote day when man first realized that there were degrees of quality of behavior, competence has been an interest of the first magnitude. Recognition of the fact that some people were more competent than others raised the question as to how they came to possess their special abilities. Why can some individuals shoot an arrow with more accuracy than others? Is competence determined by an accident of birth or is it learned? If learning plays a part, are there good and bad ways of learning? What part does skill play, and what is the significance of knowledge in determining competence? Also, what about the individual who seems to possess the necessary skills and knowledge but is unable to achieve the desired competence because of a "bad" attitude?

It is immediately seen that these questions devolve upon that area of investigation known as psychology. If psychology lays any claim to recognition as an organized discipline it must substantiate that claim by its findings which concern the unique factors of human personality. That is, it must deal in those elements which are distinctly characteristic of human behavior, and which distinguish such behavior from that observed in other organisms. It is in this connection that psychology has a direct bearing upon competence. As the science of human behavior, psychology should furnish the facts needed to ascertain whether or not a particular human action is in accord with the best that is known about competent living. Further, it should furnish implications as to how people may learn this "better" type of behavior. To put the matter somewhat differently, before it is possible to describe competent human behavior and tell how it is to be achieved, facts must be had regarding the human organism—what motivates it, what its needs are, how it "should" behave, and how it learns.

Psychology, like other areas of organized knowledge, is continually making progress in its search for improved concepts and understandings. However, as with many new facts and understandings, there is a time lag before the new knowledge receives wide dissemination or general acceptance and is truly integrated into the living pattern of the culture. Although serious, this lag would not be so critical were it not for the fact that the cultural assimilation is eclectic. The new knowledge, skill, or theory is used in some areas of activity but not in other, just as appropriate, areas, where outmoded notions continue to direct the activity. Over a period of time this eclecticism produces, to say the least, an inconsistent way of living. The unrecognized conflicts of this kind of behavior militate against the very idea of a consistent and competent way of life.

For this reason it is deemed appropriate to point out some psychological notions that have been widely accepted, and to show how each implies something different in the way of competent behavior. Inherent in the discussion will be the kinds of inconsistencies which develop when an individual uses first one and then another of these ideas as the basis for his "pattern" of competence.

FACULTY PSYCHOLOGY

During the nineteenth century the basic theory of human personality was faculty psychology. Faculty psychologists held that the human mind was made up of a number of specific and separate faculties. This, of course, was a dualistic theory—the human organism was thought to be composed of a material body and a nonmaterial mind. The body served as housing and transportation for the mind. The mind did the thinking, feeling, reasoning, and willing for the body, although at times difficulties and conflicts arose. The body, being of baser material stuff, frequently rebelled against the dictates of the mind, and a well-developed mind was needed to keep it in line. The important thing in achieving competence was to produce a competent mind, and this was done by a rigorous training and disciplining of the various faculties which made up the mind. Naturally the value of the mind-training activity did not reside in the content of what was studied, but in the form. The subject matter of the training was not of most worth; the exercise and discipline given to the faculties was the prime objective. The faculty of memory, of the will, of reasoning, and so on, were separate, and each needed to be exercised and developed. The trained mind was the competent mind and the competent mind was one which had each faculty disciplined to the highest degree.

Also included in this concept was an idea of transfer of training. Anything which developed a faculty increased its effectiveness for all appropriate purposes. For example, memorizing a long poem was supposed to help one remember the multiplication tables or recall a friend's name. Thus, in all cases, competence was achieved by developing the faculties, exercise was the appropriate way of developing a faculty (the mind's faculties were comparable in a nonmaterial sense to body muscles), and a developed faculty had increased power which could be put to use in any human endeavor. Doctors, teachers, lawyers, businessmen, and engineers were all trained in about the same way—exercising and building power into each of the various faculties. True, each of these occupations required different techniques in their performance but such techniques could be easily picked up by the well-trained mind after the man had entered his profession.

THE NATURE OF COMPETENCE AS IMPLIED BY FACULTY PSYCHOLOGY

Applying the ideas of the faculty psychology to what is meant by the "competent person," we note that a great deal of faith is placed in the notion of training. Now "training" has a somewhat unpleasant modern connotation—that one organism imposes its will upon another so as to obtain a certain pattern of behavior from it. In our culture, with its respect for the democratic freedoms, the idea that one individual may force a behavior pattern upon another is not very well taken. Nevertheless, in the educational programs of faculty psychology the primary aim is to "train" a person's latent or potential abilities. Obviously this kind of program does not reflect the high-level learning done by a human being as he seeks to achieve purposes and reach goals. It approximates more nearly the training of a five-gaited horse or a retriever.

It is quite logical that under this psychology the competent person was the well "trained" person. His capabilities (faculties) had become proficient, and his mind was ready to exercise them in carrying on all of his life's tasks. The power of these mental faculties functioned in all situations appropriate to their application.

In the area of educational administration, the competent administrator was a person who had had his faculties well trained and therefore knew what was required to accomplish the necessary training in the faculties of others. He could also judge the degree of perfection which had been achieved in the faculties of his teachers. He knew the kinds of training situations which were most appropriate for improving the powers of the mental faculties and could thus set up the kind of school needed to do the job most efficiently.

Doubtless the training program under faculty psychology was rather harsh—something to be imposed upon the learners. It was not conceived possible that the learners might want to learn; they had to be forced to develop their faculties. Under this kind of scheme the teacher had to be a stern taskmaster and the administrator a harsh and demanding person because as a more highly trained person it was his duty to see that the teachers not only trained the students but improved their own capabilities as well. It is no accident that this arrangement resembled an autocratic type of organization. By its very nature it could be nothing else.

Perhaps it seems a little strange for a book about competence to include a discussion of faculty psychology. After all, its theories have been completely disproved, and no reputable psychologist continues to subscribe to them. The mind is not made up of faculties and cannot be developed by exercise. These facts have been known for half a century.

However, a look at our culture reveals that faculty psychology has not been replaced altogether by more modern and defensible ideas. Children are sent to school to have their minds developed. Mathematics is taught because it develops power in the faculty of reasoning. Will power is strengthened by forcing an individual to do disagreeable tasks. These and many other equally erroneous psychological notions continue to operate within the mores.

This misinformation therefore is important, and serious in its implications for competent behavior. As will be more completely shown, competent behavior is consistent behavior, and, as used here, consistency requires the use of facts and ideas that are the best obtainable. No pattern of competent behavior can hope to be acceptable unless it makes provision for weeding out faulty notions, psychological or otherwise, and replacing them with sounder concepts. The rapid growth of human knowledge and the improved insights now possible make it very difficult to describe competent human behavior without taking into account the manner in which the individual will change his behavior pattern to conform to the constant flow of new knowledges and ideas. It is in this connection that some "old" psychological concepts are here considered. These concepts have outlived their usefulness and have been discarded in the general area of organized psychological thought, but they hang on as a part of our cultural pattern. Although the newer understandings are accepted the old are not superseded. The new and the old become mixed into a hodgepodge of incompatible and often contradictory concepts. This, to say the least, is not the highroad to competent living.

THE PSYCHOLOGY OF "MENTAL STATES"

Following faculty psychology, probably the next important development came from the introspective psychology of structuralism and its theory of mental states. Upon this theory Herbart erected a concept of apperception and developed his well-known doctrine of learning. Herbart did not regard education as a training of faculties resident in the mind itself. In fact, he denied the existence of faculties and emphasized the role of subject matter. Rather than training faculties, education sets up certain associations or connections of content by means of subject matter presented from outside the organism.

In this kind of learning situation the teacher is of utmost importance because it is his business to select the proper material and to rigidly control the learning process. Certain formal steps in teaching method are required. The presentation of the new subject matter is obviously the important thing, but since knowing consists of the way the new information interacts with the information already known, the first step is for the teacher to prepare the student to receive the new knowledge. This preparation step calls from the subconscious the old facts that are to mix with and assimilate the new ones. With the learner thus readied, the new material is presented, allowed to interact and become integrated with the old, and subsequently applied to some task to give understanding of its usage. It was believed that all learning must follow this course.

Dewey has effectively criticized the mental states theory in the following passage.

> The fundamental theoretical defect of this view lies in ignoring the existence in a living being of active and specific functions which are developed in the redirection and combination which occur as they are occupied with their environment. The theory represents the Schoolmaster come to his own. This fact expresses at once its weakness. The conception that the importance of what has been taught consists in its availability for further teaching, reflects the pedagogue's view of life. The philosophy is eloquent about the duty of the teacher in instructing pupils; it is almost silent regarding his privilege of learning. It emphasizes the influence of intellectual environment upon the mind; it slurs over the fact that the environment involves a personal sharing in common experiences. It exaggerates beyond reason the possibilities of consciously formulated and used methods, and underestimates the role of vital, unconscious, attitudes. It insists upon the old, the past, and passes lightly over the operation of the genuinely novel and unforeseeable. It takes, in brief, everything educational into account save its essence,—vital energy seeking opportunity for effective exercise. . . .[1]

Bode has also pointed out some of the defects in the rigid and formal Herbartian type of lesson plan.

> . . . We may concede that the lesson plan has its merits, provided we do not use it, i.e., provided we do not follow it as a plan of campaign in the classroom.
>
> When the prospective teacher is required to follow the successive steps and perhaps even—save the mark—to set down beforehand in his lesson plan the answers that are to be elicited from the class, then spontaneous and effective learning gives way to dreary, soul-destroying pedagogy. Moreover, the whole scheme then becomes a device for indoctrination. The conclusion to be reached is determined in advance, and the successive steps are so arranged as to culminate in

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[1] John Dewey, *Democracy and Education* (New York: The Macmillan Company, 1916), p. 83.

> this conclusion. The method makes indoctrination the normal aim of teaching.[2]

Apparently, however, in many teaching situations the Herbartian method, with its five formal steps, has persisted to a greater degree than almost any other. It was so logical, so neat, so easily standardized that it is little wonder that many colleges still hold to this pattern. In fact, there are probably few teachers who have not at one time or another made out lesson plans carefully following the formal steps of preparation, presentation, association, generalization, and application. These steps were supposed to be equally good for the teaching of any type of information or skill. Their main effect, however, was to standardize and make rigid the method of teaching and to increase emphasis on group instruction.

That the Herbartian steps are still in wide use is well illustrated by H. Robert Kinker's feature article in *Industrial Arts and Vocational Education,* the leading professional magazine for industrial arts teachers. The following excerpts from this article demonstrate the continuing usage of the formal lesson plan.

> Developing course outlines, even though commendable as well as essential, is not sufficient to insure effective instruction. Very few experienced instructors are skillful enough to teach from a bare outline, and for the inexperienced it is virtually impossible. For that reason it is necessary to make lesson plans for the various items that appear in their course outlines. Superior teachers always plan their instruction and then follow the plan. . . . In trade and industrial education . . . instructors are encouraged to rely on the lesson plan based upon the four-step lesson. These steps consist of preparation, presentation, application, and testing. In developing a lesson plan involving the four steps there are, of course, several other factors which must be considered, but these steps are basic and no lesson will be effective if it fails to contain them. . . .

[2] Boyd H. Bode, *How We Learn* (Boston: D. C. Heath and Company, 1940), p. 156.

It should be emphasized here that *no new material* is introduced in the preparation step. The sole purpose of the step is to develop a state of readiness for the material which will be presented in the succeeding step. One of the most successful methods of accomplishing this purpose is the use of the question-and-answer procedure. . . .

It will be observed that the instructor inserts in the lesson plan the answers he thinks will be given to the questions. It is impossible to anticipate the exact answers, of course, but if the instructor is careful in constructing his questions he will be able to control the answers to a surprising degree. . . .

The initial application, especially, should follow the presentation step as closely as possible. If the lesson has to do with a manipulative skill, the learners should immediately be given jobs requiring them to duplicate the skill which has just been demonstrated by the instructor.

In the fourth and last step [the test step] the instructor determines how well the learners have mastered the content of the lesson. . . .[3]

This modern lesson plan is just as rigid and formal as any of the older designs. It has all the faults that were so effectively pointed out by Dewey and Bode. The teacher is the important person in the situation. He takes the learners in hand, controls their thinking and replies, and elicits from them the responses and actions he desires. Little or no deviation is permitted from the set routine. The whole procedure becomes stilted and stultifying with little resemblance to the way learning goes on outside of the classroom or school laboratory.

COMPETENCE UNDER THE "MENTAL STATES" PSYCHOLOGY

Whereas faculty psychology was concerned with developing an ability, training faculties by exercise—the exercise rather than the material used therein being the important thing—in the psychology of mental states the aim was to impart to the learner a great many facts. These facts were to be stored in his apperceptive mass, to be available whenever he needed them for some particular purpose. Because of its basic belief in the importance of learner interest—interest was necessary to get the facts assimilated into the apperceptive mass—a good deal of the older harshness was eliminated through the impact of the psychology of mental states. Further, the belief in the value of having available large quantities of facts led to the notion that the "competent" person was the individual who possessed these great amounts of knowledge—the "walking encyclopedia" type of person.

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[3] H. Robert Kinker, "Preparing and Using Lesson Plans," *Industrial Arts and Vocational Education*, September, 1952, pp. 209–214.

The increased importance of interest led to an additional element in the concept of a competent person. The competent educational administrator, for example, was not only a person possessed of a great amount of knowledge but a person who could maintain interest in his subordinates as they went about their jobs in the educational institution. Under this psychology, therefore, the competence of the educational administrator was rated, by and large, on two counts. Did he know the many facts and the correct procedure for getting those facts over to the students? Could he organize the school so that it was an interesting place with attractive classrooms, attractive teachers, and all other arrangements necessary to keep student interest, and consequently student learning, at a high level? In other words, did he know the things that should be learned and could he keep the students, patrons, teachers, and others interested so that the learning process would go on with the greatest degree of efficiency?

BEHAVIORISM

The next movement seriously to affect education was the growth of behaviorism with its development of the S-R bond theory and the resulting atomistic school of psychology. This evolved largely through the influence and under the guidance of Thorndike and Watson. Many educators who are now actively engaged in school work were exposed to it. According to Bode's description, the learning process under behaviorism is somewhat as follows:

> The cases just cited [stimulus-response actions of an infant] represent learning of a very simple kind. This learning is simple because the connection between the stimulus and the new response is rather easily established. In other cases learning may be slower and more involved, but the underlying principle, according to Behaviorism, is the same. Whether simple or complex, learning is a process of "stamping in" a new connection in the nervous system. . . .[4]

Thus for each stimulus received through the bodily organs there was a specific and direct response. From this theory grew the well-known Thorndikian laws of learning—readiness, use, disuse, frequency, recency, and effect. Since all learning was specific, and transfer of training was admitted for identical elements only, it followed that each item of information and each simple skill must be learned individually. Drill was employed until the desired response was automatic, i.e., a nonthinking habit.

Here was a return to something resembling the exercises of the formal-discipline theory, except that in behaviorism each item of information and each tool process would be the subject of a drill designed to reduce it to a stimulus-response habit. There would be, of necessity, a multitude of these drill items because transfer of training would take place only when there were identical elements in each situation. Testing would be of an objective type; true-false, completion, matching, and multiple-choice tests would determine whether the learner had gained the necessary information and could respond correctly to the specific stimulus.

Behaviorism began to achieve some popularity shortly after the beginning of the twentieth century. At the time of World War I it was a very "modern" psychology and the latest word in the way of theories designed to describe and explain human behavior. About this time a development occurred which has had a great effect on educational practices. During World War I it had been necessary to train large numbers of shipyard workers. Because of the press of time new methods for training such personnel had been developed, based on the trade and job analysis technique,[5] which fitted well the atomistic theory of learning advanced by the psychology of behaviorism. The occupations for which the workers were to be trained were analyzed into various jobs, processes, informations, and operations. Each of these units was then made the basis for a teaching unit. To increase the effectiveness of the instruction, unit instruction sheets, or job sheets, were prepared for each job, operation, process, or item of information. Since these training techniques were designed primarily for the teaching of certain limited skills in a relatively few highly repetitive tasks, they worked very well. They were designed to produce habit responses and naturally they were based upon the habit psychology—behaviorism.

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[4] Bode, *op. cit.,* p. 178.

We have no quarrel with this use of the habit psychology to speed the formation of badly needed skills. The difficulty arises not from the use of these techniques to prepare workers for their repetitive jobs but from the fact that these methods, developed primarily to meet the war emergency, were taken over and used in general education almost universally. Almost every teacher worked to build up a file of job, operation, information, and project "sheets" which were teaching aids to be given out to students at appropriate times. Administrators got into the game by gathering together the best of these sheets and having them published so that all teachers could benefit from the improved way of teaching.

The ineffectiveness of such devices in relation to the attainment of objectives (other than pure habit formation for repetitive jobs) has now been pretty well established, especially when the objective is teaching students to solve their own problems. Nevertheless, the use of these devices persists in many schoolrooms today.

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[5] Trade and job analysis was discussed in Chapter 2.

COMPETENCE AS PICTURED BY A BEHAVIORIST

Under faculty psyschology the competent person was the individual with the well-trained faculties, and under mental states psychology he was the individual who had stored away in his apperceptive mass a great deal of information. Behavioristic psychology also presents a unique picture of the competent man. Because behaviorism sees all human behavior as resulting from the stimulus-response bonds of the organism, it is quite logical that this psychology should view competence as the possession by the individual of the "right" stimulus-response bonds—habits.

To be competent the educational administrator must possess all the specific habit responses needed to make out a budget, deal with bus drivers, hire teachers, purchase supplies, and so on. The competent teacher, in turn, must know the right habit responses which should be possessed by her students, and the various kinds of drills to be used in eliciting such responses and building them into habits. The behaviorists never talked a great deal about where these "right" habits came from and who decided which were the right and which the wrong responses. Somehow it was assumed that the correct habits were structured in the universe and that researchers with the "right" habits of research could find them and pass them on to the rest of us.

GESTALT AND ORGANISMIC PSYCHOLOGIES

Although serving some extremely useful purposes, behaviorism left much to be desired. It was too simple a concept to explain all the complicated reactions which go to make up human personality. Further, it laid too much stress upon the effectiveness of the stimulus and not enough upon the capacity or disposition of the individual organism to choose the stimuli it would accept, depending upon its purposes. In fact, behaviorism left out such things as purpose and insight altogether.

Notwithstanding these faults behaviorism did a very great servonly sets its sights on a certain goal and fires at that goal but maintains a continuous evaluation of the results of its actions. This evaluation, if accurate, enables needed adjustments to be put into effect so that each succeeding effort will bring the individual closer to his goal.

Thus the Gestalt and organismic psychologies rather closely approximate the scientific method of problem solving. They recognize that this is the most intelligent way of behaving and imply that it represents the "natural" way for the organism to learn. Further, they offer the hypothesis that the human organism can do a great deal of problem solving on the level of purposeful ideas and relationship insights. This has significance for education because problem-solving ability can be taught and learned. Some individuals can do this kind of thing much better than others. It was said that the inventor Tesla, upon getting a promising idea or insight, would mentally build the improvement into whatever new machine he was working on and mentally watch it run in order to see if there were any "bugs" in it. In a perhaps more limited way, all normal individuals can do the same when they get ideas on how to handle a problem, and gain insights into the relationships of the ideas and the problem situation. Although this gaining of insights and production of ideas does not give a final solution to the problem—this must wait until the plan is actually put into operation—it is an important economy device in that it weeds out a great many faulty notions before the phase of experimental testing is applied to those that appear to be most logical and likely to be successful. This obviously is quite different from blind trial and error and saves much time and effort. All high-level problem solving goes through a stage wherein a guess or hypothesis is formed regarding the things that need to be done in order to successfully attack the problem. It is this kind of activity which is recognized as being paramount by the Gestalt and organismic psychologies, and a skill basic to the best learning procedures.

COMPETENCE AS IMPLIED BY THE GESTALT AND ORGANISMIC PSYCHOLOGIES

Whereas under the psychology of behaviorism the competent person was the one who had all the correct habits built into him in the form of stimulus-response bonds, in the more modern Gestalt and organismic psychologies he is the individual with not only good habits but, of more importance, skill in problem solving. Under these psychologies the human organism is much more than an automaton and has a great deal to say about what goals he will choose to strive for and what methods he will use to reach them. He is not a complete captive of his environmental culture.

The competent educational administrator is the superintendent or principal who can demonstrate skill in identifying and intelligently dealing with the problems inherent in his job. He understands that no two problems will ever be quite the same but that all will yield to a sufficient application of the problem-solving method. He possesses good habits but does not depend entirely upon habit responses; he realizes that there are higher levels of human skill and that these are to be found in the realm of the application of the scientific method. He is concerned with meeting the educational needs of the students through providing learning situations which will help them build skill in this important method.

This attitude is based upon two understandings. First, the scientific method of problem solving is the most effective method yet devised. Second, although organized learning situations—schoolroom experiences—based upon problem solving are more difficult to arrange than the ordinarily used rote situations, they are more effective in producing the desired kind of learning. Knowledge learned through the activities of problem solving will be more readily available when other problem situations come along than knowledge learned purely as a rote exercise. That is, the value of an item of knowledge abides not only in the intrinsic worth of the knowledge itself, if there be such, but in the manner in which it was acquired, because this manner of acquisition determines pretty largely the way it will be used, and whether it will be dynamic and worth while or stagnant and useless.

Our discussion of Gestalt and organismic psychologies and their bearing upon competence has shown that one of the highest capacities of the human organism is the capacity to do reflective thinking in problem solving—the scientific method. This is an extremely interesting development because the earlier discussions of philosophy, in Chapter 5, demonstrated that the scientific method was considered the only acceptable way of getting facts and arriving at truth. In whichever direction we look, the scientific method of problem solving looms large as a most important human invention. The next chapter will be devoted to a somewhat more thorough consideration of the meaning and implications of the scientific method of problem solving.

CHAPTER 7

Competence and the Scientific Method

In the previous chapters the scientific method has been mentioned numerous times and in several different connections. Particularly in Chapter 5, in the discussion of pragmatism, and in Chapter 6, in the discussion of the Gestalt and organismic psychologies, it was portrayed as the only acceptable method of getting at facts and establishing truth. Further, the scientific method represents a pattern of dealing objectively with human experiences, and the only one which includes all the elements deemed desirable in a pattern designed to seek out and establish facts. In a like manner, the Competency Pattern has been advanced as a pattern which will enable us to get at and deal with all those items and relationships implicit in the term *intelligent human behavior*, and the application of valid facts is the only way to get intelligent behavior. No matter how ingenious the method employed, unless the facts are valid the behavior cannot reflect the best kind of intelligence. Thus the Competency Pattern is heavily dependent upon the scientific method for its facts, for its general procedures, and for its basic conceptual notions. For these reasons an adequate understanding of the scientific method is important, and in this chapter its relationships to competence will be given rather thorough treatment.

MODERN BELIEF IN THE VALIDITY OF THE SCIENTIFIC METHOD

Our civilization evidences a very great belief in the scientific method—a considerable change from the older attitudes, which judged fact and validity in terms of revelation, authority, Platonic reason, and the like. Indeed, the scientific method is widely acknowledged as the only acceptable method to be used, not only in activities aimed at determining facts and increasing knowledge but also in all other human activities and endeavors.

It is to be admitted that this confession of the potency of the scientific method in all kinds of activities is at present more in the nature of a logically developed conclusion than a fact of actual practice. We value the results of science, but its procedure of carefully and impartially directing behavior from an assessment of the best available facts is foreign to the majority of human actions. Should the improvement of behavior patterns appear a hopeless task, it is important to remember that the human race has been a long time in learning to use the scientific method in a limited area. Its range of application can be vastly increased, and, as has been several times hinted, the Competency Pattern represents an effort in that direction.

THE SCIENTIFIC METHOD DEFINED

Many volumes describing the method of science have been published. It is not our purpose to review, or to attempt to improve upon, any of these descriptions. Instead, we shall restate some of the important principles of the scientific method so that the point of view herein used may be more completely understood. As a procedure the scientific method is generally said to have several steps: identifying the problem, gathering information relative to the problem, making a guess or hypothesis regarding possible solutions or remedies for the problem, engaging in activities designed to test out the truth of the hypothesis, and finally, evaluating the effectiveness of the action and, if necessary, formulating new hypotheses to further attack the problem. So stated, however, the scientific method becomes a rather rigid activity. These steps constitute only a small part of the method; of considerably greater importance is the mental attitude. In the final analysis, the scientific method represents an attitude toward truth and constitutes a procedure for applying certain rigorous criteria to the attitudes and findings. These criteria are devised to eliminate the source of human error, which is so often attributed to the emotional aspect of the problem. They also serve to rule out those fallacies which may be attributed to errors in reasoning. (The fact that something is reasonable is no assurance that it is true.) Thus, the scientific method, with its impartial assessment of facts and rigorous testing of the results of such assessment, is the most intelligent method yet devised for dealing with problems. It is, in fact, frequently referred to as the "method of intelligence."

The method of intelligence is the logical method for determining truth and knowledge. But truth means nothing and knowledge is completely useless unless they in some way affect the quality of human living. Inversely, the quality of human living is directly influenced by the availability of those facts and knowledges which are necessary for the ongoing task of life improvement.

UNIVERSAL APPLICABILITY OF THE SCIENTIFIC METHOD

Since the scientific method is appropriate not only for discovering facts but also for directing all activities of an individual and of a social group, certain of the rigors imposed by its criteria will be used to guide all of the various kinds of human activities. In addition, these criteria will eliminate a number of conflicting procedures from the scene of action. Much in the nature of whim, fancy, untested ideas, and the like, will be ruled out. The need for a wider application of the scientific attitude has been well stated by Sullivan:

> There is probably no other period in history, since modern science began, when the particular values it incorporates were so rarely to be encountered in other human activities. The human tendencies to prize certitude and fear knowledge, to indulge emotion at the expense of reason, were probably always as strong as they are today, but the circumstances of the time did not show them up in so pitiless a light. The mass of men were probably always as impatient of that careful, honest verification that is the very essence of science as they are today, but there was no huge popular press to bear daily witness to the fact.
>
> If we are to judge from what seems the overwhelming evidence provided by such activities as politics, business, finance, we must conclude that the attention and respect accorded to science is directed wholly to its results and that its spirit is the most unpopular thing in the modern world. Yet it could very reasonably be claimed that it is in its spirit that the chief value of science resides. . . .[1]

Thus, it is again noted that, in spite of wide recognition of the need for the scientific method in areas other than science, it is very little used.

THE SCIENTIFIC METHOD AS A PRODUCER OF FREEDOM

Obviously the increased use of the scientific method will have its restrictive aspect. A person will no longer be justified in pursuing a course of action simply because it is the popular thing to do, or follows some particular "school of thought," or satisfies some particular whim.

However, a more thorough consideration of the matter shows that the method of science is also a freedom-producing technique. The rule that each person drive on the right side of the highway is an example of restrictions which really are nothing more than agreements to take care of some of the simple items in the business of living so as to free us to work on more important matters. Thus in using the scientific method to rule out whim, fancy, emotionalism, guesswork, and all of the other kinds of unscientific behaviors, we will achieve a much more logical and intelligent type of existence, and one vastly more desirable than the kinds of living possible under whim, authority, revelation, and similar guidelines. The elimination of unscientific behaviors—the restriction—will actually free us from the gross and costly errors of such unscientific actions.

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[1] J. W. N. Sullivan, *The Limitations of Science* (New York: The Viking Press, Inc., 1933), pp. 163–164.

An example illustrates this point more forcefully: A man taking his morning shower discovers an ominous lump on his body. Obviously this may mean a cancerous condition. A number of paths of action are open to the man. He may be able to convince himself that the lump does not exist, and continue his activities as if he had never seen it (psychological block). He may seek comfort and cure in medical quackery, where he will be assured that nothing is very wrong and that he can, through certain procedures, be immediately and definitely cured (use of untested methods). He may be overcome by an unreasoning fear and commit suicide (emotion). He may assume that the affliction is a punishment and may obediently suffer without any effort to remedy the situation (erroneous belief). Or he may seek competent medical advice and endeavor to use the best in the way of modern skill and medical knowledge to effect an amelioration of his situation (scientific). It will be generally admitted that the last of these several courses of action is the only one that could be classified as intelligent. Likewise, it is seen that similar, although in some cases perhaps more subtle, examples could be drawn from all areas of human activity. For any human problem or concern there will almost always be several possible courses of action, most of them far from intelligent.

THE SCIENTIFIC METHOD IN EVERYDAY LIVING

In a number of highly specialized areas—physics, chemistry, biology, and the like—the procedures appropriate for using the method of intelligence have been very well worked out. However, in view of all the activity that goes on under the precepts of the cultural mores, or based on emotional attempts at status building, or governed by unreasoned fear and superstition, it is evident that the method of intelligence has not become the directing force for the pursuits of everyday living. It is all well and good to say that a person should become more intelligent and scientific in his behavior, but just how does a man go about acting intelligently when he is purchasing a new automobile? Can he rule out all the emotional factors and really be "scientific" and "objective" in this task? How can a school superintendent be "scientific" when he is employing a new teacher, particularly if her uncle happens to be a member of the school board? These questions simply reinforce the notion that, just as there are appropriate behavior patterns to follow in the laboratory when one is engaged in a "scientific" investigation, there should also be behavior patterns appropriate to the daily activities of an individual engaged in living an intelligent life. This is the overall, or to be more accurate the underlying, notion of the Competency Pattern.

THE COMPETENCY PATTERN AND THE SCIENTIFIC METHOD IN HUMAN AFFAIRS

Although not advanced as a panacea, the Competency Pattern represents a step toward this needed understanding of how to apply the scientific method to everyday living. Just as the scientific method is the best known procedure for discovering facts and establishing truth, so the Competency Pattern is the most appropriate way to incorporate these facts into an intelligent way of acting. In many ways the two are analogous. Both represent procedures, methods, understandings, and attitudes about proceeding toward definite purposes. Both are based upon theories and use theory to direct the way in which actions are to be carried forward. Both have definite criteria and add rigor and discipline to behavior. The scientific method will admit only those facts, directions, and results which fulfill its criteria; the Competency Pattern will rule out many kinds of behavior which do not contribute to the overall pattern established by its criteria. The scientist in his laboratory finds it extremely difficult to behave in any manner other than that prescribed by the scientific method, largely because this is the cultural pattern of the laboratory. A person who behaves otherwise risks being laughed out of business. (Of course such was not always the case—not until after the examples and battles of the great names in science: Galileo, Newton, etc.) Inversely, behavior outside the laboratory is anything but scientific, and again this is because of the cultural pattern. A person who conducted his everyday affairs scientifically would probably be in just as much danger of ridicule as the above-mentioned "unscientific" scientist. To move contrary to the flow of the cultural pattern is always difficult. Although the Competency Pattern will probably not bring about an easy change in the cultural pattern from its present unscientific ways to more intelligent procedures, it will point the way and supply the techniques for those hardy souls who want to achieve more intelligent social behavior. Further, it will provide a model so that intelligent behavior in various jobs can be effectively described. If the method of intelligence can become the appropriate method in an ever increasing number of activities, it will in the foreseeable future become the rule and not the exception of behavior.

THE COMPETENCY PATTERN AS A LEGITIMATE WAY OF FORCING "SCIENTIFIC" BEHAVIOR

Returning to the comparison of the Competency Pattern and the scientific method, we see that both understand that man's behavior must be directed and even forced into the right channels. The idea of forcing anyone to do anything is not a popular one. In this case, however, the forcing is to be done by ideas and facts, or rather, by a person's believing in certain ideas and accepting certain facts. It is not the forcing of a slave by his master or of the weak by the strong. The forcing exerted by the acceptance of an idea does not have the unpleasant connotation found in a situation where one individual is manipulated into some action by pressure from another person or group. That is, when the forcing is internal and intrinsic, and is based upon the individual's understanding of an idea and its consequences, the compulsion to action is democratic. Particularly is this true if the individual is given a wide choice of ideas from which to select.

Thus the method of intelligence is a very powerful concept. When it and its implications for improved behavior are well understood by the individual, and when he is given a pattern such as the Competency Pattern to assist him in putting the method of intelligence to work in his own particular job, he will be "forced" to alter his behavior to conform to the improved pattern. This is, of course, the democratically ideal procedure for getting people to change their behavior patterns. It also represents a faith in the attractiveness of the scientific method to the majority and the best of modern minds and a further faith that, given adequate opportunity, these minds will embrace the method of intelligence as an improved way of living.

ASSUMPTION OF VALIDITY OF THE SCIENTIFIC METHOD

Patterned ways of living are not a recent human invention; they are as old as humanity. Doubtless the first patterns were the strictly habit patterns, developed as man learned to live in a primitive social organization and containing little or no conscious effort toward logical formulation. Gradually, as philosophy grew into maturity, carefully reasoned patterns of behavior were developed, and these came more and more to be expressed in adequate scope and necessary detail. In a modern civilization patterned ways of living are built into the culture, so to speak; from infancy each individual is indoctrinated in their ways of thinking and acting. Church groups represent one of the best modern examples of these patterns. As is easily observed, the church has a set of thought-out and reasoned rules. In most cases these include revealed truths as well. When an individual carefully follows these laws he is exemplifying the behavior pattern required by his church group and is living, from its viewpoint at least, a competent life.

Because the above-mentioned patterns are based on "idealistic" rules they are rigid or closed systems and slow to change. In an age when human affairs moved more slowly they served very well. With the tempo of modern living they are largely inadequate, show the results of stagnation, and instead of assisting in the transition process tend to create increased friction between the old and the new. This is particularly the case since the advent of science with its pragmatic views regarding the efficacy of change, and its belief that improved concepts will grow from the organic foundation provided by the older notions.

Although some scientists continue to cling to the idea that man may yet find an unchanging law to explain the behavior of the entire universe, all admit that such a discovery is some distance in the future. Most agree that the possibility of such an inclusive and eternal law is rather slim and believe that in science the growing and developing concept is the important factor to be nurtured. That is, in science a good concept is not one that is eternal but one that grows out of experimentation and observation and that will point the way to new experiments, observations, and formulations.

This puts quite a different light on the idea of good behavior patterns. Under the older and more rigid system the rules were unalterable and good behavior patterns were those which were in proper accord with the rules. This problem in itself posed sufficient difficulty but it was comparatively simple compared to the modern situation, wherein the rule itself may, and probably will, change. How does one set up a behavior pattern in a universe where such a great discovery as Newton's law of gravitation is to be regarded not as an eternal truth which will always remain perfect but simply as a wonderfully fruitful and productive concept which has made possible much additional observation and experimentation and has culminated at the present time in Einstein's improved concept of the universe? As was said, there is bound to be considerable confusion in the business of setting up adequate guides to everyday living. Two possible choices present themselves. First, we may continue with the old rigid notions and try to imagine that modern changes are really not significant but are merely temporary disturbances in the otherwise smoothly flowing stream of eternal law. This is not a very practical, "realistic," or intelligent way of looking at the problem. Second, we may attempt to develop a flexible and expanding pattern consonant with the scientific method and capable of following the constantly improving concepts that emerge from applications of the scientific method.

It becomes obvious that the scientific method must be accepted as a valid procedure before there is any need for involved consideration of the Competency Pattern. Under the old and more static kinds of situations a dynamic and flexible pattern of behavior was unnecessary. The more rigid patterns served well enough. With the advent of science and the rapidly changing concepts it brought about (this includes the changing social and economic conditions resulting from the new concepts), the need for the Competency Pattern becomes crucial. Without an adjustment of behavior patterns the resulting strains may damage the basic social structure.

PART III

AN APPLICATION OF THE COMPETENCY PATTERN

CHAPTER 8

The Community Setting

In order to place the role of the educational administrator in proper perspective, it is appropriate to discuss the community setting in which he operates. The administrator of the school is not all things to all people. He is a leader in one community function—education—and the nature of his leadership needs to be carefully defined. Leadership has no value *per se*. It must find its expression (and thus its definition) in the performance of tasks relating to some function. Thus, the question becomes: "What does the educational administrator do to carry out his community function and at the same time further the total integration of his community?"

THE NATURE OF A COMMUNITY

A community has been defined in many ways and from many points of view. At various times it has been said to derive from geographical and topographical phenomena which brought people together in associated groups—fortunate arrangements of rivers, climate, fertile soil, mountainous protection from hostile peoples, and the like. Other definitions have stressed the importance of racial characteristics in the formation and sustenance of a stable community. Still others have asserted that the cultural mores of the group constituted the real essence of the community and determined its success.

A more recent concept views the community in terms of its service institutions. A community is identified by the cluster of services it provides for its members. Or, in reverse, the different service communities are identified by observing where people go to procure the services they require.

All of these definitions have been useful, and, from the various points of view of their proponents, they are logical and correct. However, in the light of modern psychological and sociological understandings, there is a more fundamental way of examining and identifying the important structural elements of the functional community.

THE REALITIES OF A COMMUNITY

Mankind learned a long time ago the inadequacy of isolated individual effort and, inversely, the many advantages of coöperative effort. Such a simple understanding is obviously the reason for the existence of communities. Human needs, both basic and derived, can be more effectively and efficiently satisfied through the coöperative arrangements found in a community. Even a casual observation reveals the many advanced skills and services made possible through the division of tasks and the job specialization fostered by the coöperative society. An individual may achieve a high degree of ability in one area of service because the efforts of others have freed him from the necessity of having some small degree of ability in each of the many areas where he has needs. For example, the modern surgeon can develop great skill in operating techniques because the efforts of others have provided him with shelter, clothing, food, transportation, instruments and hospital facilities, and a host of other important services, and he is free to concentrate upon the efficient and skillful performance of his own specialized job.

This kind of specialization, coupled with the coöperation necessary to make it possible, seems to be the most effective way yet devised for the furtherance of human progress. Obviously, therefore, one of the realities of the community is to be found in all of the tasks the community members are performing. Regardless of whether the activities are judged good or bad, they are there within the community and indisputably constitute one of its realities.

THE OBJECTIVE REALITY OF THE COMMUNITY

From this point of view, the *objective reality* of the community is the totality of the various tasks being performed by its members. Direct observation of task performance is possible.

At this point it may be pertinent to mention that *task,* as used here, connotes a broader area of activity than is generally assigned to it. It means any purposeful activity that is in some way related to a community function. The wealthy clubwoman in organizing a community welfare fund is performing a task just as definite and identifiable as the carpenter's task of installing an attic fan. A task, then, is simply a portion of the total activity of the community group. Tasks may be pleasant or unpleasant; they include not only those activities usually termed work but also recreational and other pursuits as well. In general, a task may be identified by its element of doing, the importance of the outcomes to the doer and his associates, and the general agreement, at least by members of the group, that it be done in a certain way.

When tasks are defined in this manner it is readily seen that the total activity of the community is nothing more than an assembly of the various activities of its individual members. By studying the various tasks which make up the objective reality of the community it is possible to identify those which are of critical importance—those which primarily influence the success or failure of the community. Naturally this is important to all members of the community, and it is doubly so to those engaged in the school enterprise and charged with "the improvement of community living" through education.

However, objective reality is not the only reality in a community. It gives a synoptic picture of *what* is being done but says little or nothing about the *methods* of task performance or the *whys* of such performances. For example, the institution of medicine is, among other duties, charged with the responsibility of controlling the spread of infectious diseases. Logically this control could be achieved by putting to death all persons found to be infected. However, at least in enlightened communities, such extreme measures are not used, for a number of reasons, and there are acceptable procedures for achieving the same end. The beliefs and values held by the people of the community constitute an intangible reality which in a large measure controls the more obvious objective reality.

THE SPIRITUAL REALITY OF THE COMMUNITY

The spiritual reality of the community is the totality of the moral values, ideals, beliefs, principles, and important assumptions which control action in task performance. These values do not permit direct observation, as in the case of the objective reality, but are readily deduced from the kinds of actions found in the objective reality. To illustrate, if an individual performs his tasks in a manner which preserves and furthers the dignity and self-esteem of other individuals, it may be inferred that this person's values include a belief in the worth and dignity of human beings. Furthermore, if similar behavior is general throughout the community, such a belief may be assumed to be an important element in the spiritual reality of the community.

While the spiritual reality does not define what the various tasks are (a belief in the dignity of man does not indicate when he is hungry or naked), it does largely control the way the tasks are to be performed. It sets up guidelines for proper and improper behavior. Naturally the guidelines are not static; beliefs are constantly being modified and redefined. However, the change in value pattern is usually rather slow and methodical. The spiritual reality of the community is indeed *its most stable element.*

THE "IDEAL" COMMUNITY

If the community elements of (1) the objective reality and (2) the spiritual reality are accepted, it follows that the most closely integrated community is one in which *all* tasks are performed in terms of similar value patterns. Indeed, there must be some common values before the community can exist at all, and as the individual value patterns approach identity the integration of community functions will approach perfection. This is not to indicate that such a complete and perfect integration of community functions would ever be possible and, if possible, desirable. If it did occur the community would have to be a closed and self-contained system. As was pointed out in Chapter 4, such closed systems rapidly come to a point of arrested development followed by entropy.

Thus, to maintain both objective and spiritual growth, the community will need to keep up a continuous intercourse with individuals and groups possessed of differing viewpoints and differing values. Naturally this interaction will produce clashes at both the objective and the value levels. However, these clashes are not deemed to be bad *per se*. Actually they are essential to that constant reorganization and reorientation which is growth. They become bad only when they get so large, violent, and uncontrolled as to result in a social regression to the state of anarchy. The major point here is that some controversy is essential to the continuing evolvement of better and more adequate communities of social beings.

The reader will notice that nothing is said regarding the kind of community that will result. This is the prerogative of the people who make up the community. However, be it a community of saints or of thieves, the desired integration of effort can occur only when similar value patterns are in operation and are in a constant process of testing and reorganization.

THE COMMUNITY REFLECTED IN THE COMPETENCY PATTERN

To use the Competency Pattern in a particular community setting we must consider the job to be done. What tasks make up the job and how are they to be performed? The task descriptions unite the objective and the spiritual realities of the community by showing what is to be done and the way it is to be accomplished. The ways of doing are, of course, direct reflections of the value pattern (spiritual reality) of the community. When the value pattern is stabilized the methods of task performance are easy to recognize and describe. When there are conflicting and competing value systems there will be uncertainty and confusion as to the proper methods of task performance. In any case, it is mandatory in the building of competency patterns that the various community groups arrive at agreements regarding the scope of their jobs and the value bases upon which they will operate. An extension and combination of competency patterns will then clarify and improve understanding of the total work of the community, the division of labor and the function of each of the community institutions, and the common core of values giving direction to all community activities.

ORGANIZATIONAL STRUCTURE OF THE COMMUNITY

The most logical way of viewing the organizational structure of the community is through its various institutions. The medical institution, the school, business, transportation, publications, and civil government are examples of community institutions. Each one is composed of groups of people working at appropriately clustered (related) tasks, using specially provided facilities and common administrative controls, and usually working in fairly close physical proximity. Each institution is charged with fulfilling one or more of the functions of community living. The medical institution is responsible for safeguarding and improving the physical and mental health of the community, the school for improving community living through education and training, and so on through all the functions of all the institutions.

It will be noted that a function is usually given in terms of a generalized, and simplified, job description, or a segment of such a description, and may apply to the tasks to be performed by a person or a group. That is, each person in the community has a function to perform. People with related functions may group together into an institution with a major community function. And finally, institutions integrate to form the larger function generally known as community living.

THE SCHOOL AS A COMMUNITY INSTITUTION

The school has a job assigned to it by the community. A description of the job will also be a good description of the function of the school. Naturally, if the overall job of the school is subdivided and categorized the result will be a listing of the many tasks that are (or should be) performed by the various members of the educational institution. And, to repeat a previous statement, when these tasks are restated in terms of methods of performance—not just what is done but how it is done—the ideals of the community are brought into play as directional and integrational forces. Directional because they reflect important beliefs and attitudes, and integrational because, at least in a large measure, they furnish guidance for all the community's activities.

THE SCHOOL ADMINISTRATOR

One of the important aims of this discussion is to reveal the place of the school administrator in the community. Figure 15 is a diagram showing the administrator within the community matrix. The large block represents all of the tasks performed in the community. Since similar and related tasks tend to cluster and form institutions, the various institutions are shown as squares within the community block. Each square represents the tasks appropriate to the function (job) of the specified institution. As an important community institution, the school has a group of tasks to perform and is therefore represented in the diagram along with medicine, business, law, agriculture, and so on. To clarify the picture, however, it must be remembered that institutions do not perform tasks except in a figurative sense. Tasks are performed by people. Thus, each of the squares representing institutions contains many smaller

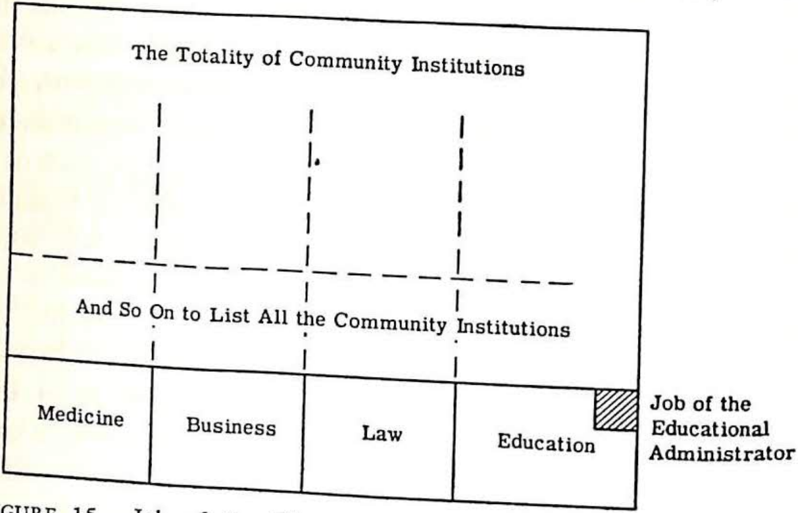
The Totality of Community Institutions
And So On to List All the Community Institutions
Medicine
Business
Law
Education
Job of the Educational Administrator

FIGURE 15. Job of the Educational Administrator Located Within the Matrix of Community Institutions.

squares representing the job tasks of the people who actually do the work. Within the educational institution is located a small square to indicate the tasks which make up the job of the school administrator.

When viewed in a matrix of this kind, competent individual behavior on the part of the school administrator will be much easier to describe, identify, and evaluate. Also, it is very evident that the competency pattern of the educational administrator is only one of many such patterns which will be needed to cover the objective reality of the total community.

At this point a word of caution may be appropriate. When separating out the tasks of the educational administrator from all the many activities found in the community, one may feel hopelessly involved in minute bits of job performance having no apparent relation to the important business of community living. There are two reasons for this feeling. First, one may lose sight of the fact that competency patterning requires a constant reflection of the spiritual reality of the community. Each task has definite relationships and community-wide integration because it is stated in terms of the important community beliefs. The second cause of difficulty comes from an impression that competency patterning is rigid and mechanistic. Further and more complete understanding of the patterning technique will reveal that such is a false impression. On the contrary, behavior patterns are basically dynamic and experimental in nature.

CHAPTER 9

Planning for Program Improvement

Chapter 8 considered the nature of the community in which the educational administrator operates. Here we shall be concerned with how the community and the individuals within it grow and develop best. It is widely agreed that any intelligent effort toward improvement must be based upon sound planning. There is also a high degree of consensus regarding the elements contained in such a plan for improvement.

OPERATIONAL STEPS IN PROGRAM PLANNING

In an elementary or simplified form a plan for program improvement must include three general factors. First, before improvement can be achieved we must recognize what it includes. This may be stated as a direct question: "Where do we want to go?" Although the projected and visualized goal may not be completely adequate, such projection is necessary to provide the blueprint which is the plan of action. As the action unfolds, progress evaluation may reveal weaknesses in the original blueprint and dictate revisions. However, this fact in no way minimizes the need for the best possible planning and for the visualization of the most effective solution to the problem of improvement.

The second step calls for an answer to the question "Where are we now in terms of where we have decided we want to go?" Obviously it is not possible to evaluate effectively except from certain agreed-upon points of reference. Logically, therefore, evaluation of the present situation cannot proceed until a better program has been projected and visualized. The 1920 model motorcar was a good car in its day. When viewed from those points of reference available in 1920 it was readily acceptable. When viewed by the standards of the modern automobile such acceptance vanishes. However, if in the past several decades no one had visualized and designed an automobile more appropriate to our needs, the 1920 model would undoubtedly have remained as our concept of a "modern" automobile. In any activity, be it building cars or training teachers, the quality of the activity can be assayed only in terms of the achievement of purpose. Furthermore, purpose is drawn from the previously formulated goals which represent a hypothetical solution to the problem of improvement. In other words, before the present program can be evaluated we must have in mind something which we believe will be better and which will serve as a basis for comparisons. Otherwise the study of present activities can be nothing more than a gathering of facts with no plan for putting those facts to work.

With satisfactory progress in step one, "Where do we want to go?" and in step two, "Where are we now in terms of where we have decided we want to go?" implementation of step three is possible. Step three may also be described by a simple question. "What do we need to do so as to get from where we are to where we want to be?" The answer is directly contingent upon the effectiveness of the work done in steps one and two. When a clear vision of the goals to be achieved (step one) is used to evaluate the present situation (step two), actions needed to effect the desired transition (step three) become increasingly apparent. The necessity for pruning off deadwood, improving the operational climate, correcting weaknesses, adding new elements and methods, and the like, will be revealed. Revision, experimentation, and evaluation will be more realistic and effective because they are recognized as integral parts of the growth needed to achieve the prospective improvement.

DIFFICULTIES IN USING THE PLAN

To claim either directly or by implication that the foregoing plan for improvement is original would be both presumptive and false. It is a plan that mankind learned to use a long time ago. It is the plan used by the automobile manufacturer to improve his product, the farmer to grow more and better corn, the atomic scientist to produce weapons of destruction.

At this point the reader may raise a logical question: If the plan for improvement is not new, and if it is well understood by almost everyone, why waste time discussing it? The answer is that certain difficulties arise whenever the plan is applied to a particular task, whenever it is used to design programs for the improvement of human behavior—e.g., educational programs. Furthermore, the difficulties are crucial because they appear in the first step of the plan, and, as has been noted, without a clarified projection of the goals to be achieved the subsequent steps lack direction. *The trouble comes in trying to give an adequate portrayal of the way we want people to behave after they have been subjected to the educative process.*

This statement may come as something of a shock to those accustomed to thinking that the specific objectives of education are well defined and universally accepted. Such thinking, of course, is not without a degree of validity. We do have some excellent statements of educational objectives, both for the area of general education and for the various specialized areas such as teaching, educational administration, business, law, and the basic disciplines. However, to put it bluntly, these listings of educational aims are not stated in usable terms.

A bit of reflection upon how educational aims and objectives come into being may help clear up the cause of the difficulty. As the human race has evaluated its past experience, it has recognized that certain ways of living are better than others. For example, since physical health is apparently an essential for living a "good" life, we have health as an educational objective. Since democratic social relationships are seen to be good, we have democratic living as an aim. And so on for all the various aims and objectives commonly recognized as valid for education. There is no quarrel with these objectives. However, at this point an interesting discrepancy appears. From past experience man knows that the wheel is a very important factor in effective living, yet we do not have wheels as an educational objective. It is easy to see why not: Everyone recognizes that, indispensable as it may be in our culture, it is only in certain devices with certain purposes and in certain relationships that the wheel possesses importance. And the function of the wheel, in turn, is largely determined by the relationships and purposes of the total mechanical device.

The wheel serves its purpose, then, only when it is properly related to the other component parts of the device. Also, modifications in function and structure are modified according to the situation in which the wheel is being used. Furthermore, there is no difficulty with the idea that a wheel, as such, is neither good nor bad. It becomes good or bad depending on the particular use to which it is put.

A discussion of wheels may seem out of place in a consideration of ways and means for improving an educational program. It is given here for purposes of comparison and to highlight one of the serious blocks to program improvement.

Educational activities are generally conducted for the purpose of bringing about desired behavior changes in people. When his behavior reaches a satisfactory developmental level a person is said to be competent in that particular area, whether it is the area of general education or a program of specialized education. In terms of his health, when the student displays the desired and appropriate behavior, it may be said that he is competent in the area of healthful living, and that the educational objective of health has been achieved. Likewise, in educational administration, competence is achieved when the administrator successfully performs those tasks which make up his job. Thus, educational programs are for the purpose of bringing about the development of competent behavior, in terms of the things people do or should do.

NECESSITY FOR DESCRIPTIONS OR BLUEPRINTS OF COMPETENCE

As previously noted, the usual procedure has been to describe competence in terms of human traits, qualities, or abilities. Lists of the competences required were believed to be an accurate description of the desired kinds of behavior. However, traits and abilities, when taken out of context and isolated from the behavior situation in which they occur, lose most of their real meaning. Consider, for example, an item that is found in almost all statements of needed abilities: "the ability to work with people." Everyone seems to agree that this is a desirable attribute in educational workers. But aside from its emotional acceptance, exactly what does "the ability to work with people" mean? To the elementary teacher, it means guiding small children; to the educational administrator it means coöperative policy making; to someone else it may mean the "selling" of a program to the public. It means many things, depending upon the person, his job, and other elements of the particular situation, and therein lies one of the major difficulties in using lists of abilities, traits, and qualities to describe competence. Any adequate description of competence will have to include the particular situations in which the ability or trait makes its contribution, and will have to describe the relationships between these personal elements and various other contributing elements.

The alternative to describing competence in terms of the situation wherein it occurs is simply to continue gathering traits, qualities, and abilities because they are "good," but being careful never to become specific about the situations in which they are good. Although this procedure would undoubtedly produce some very impressive lists which could be subdivided, categorized, and variously manipulated, it is doubtful that the results would be a useful description of competence. We may draw an anology: A mechanic went about buying wheels simply because wheels are good devices. He assembled an impressive collection. However, because he had not chosen his wheels for specific purposes, he ran into immediate difficulties. He found he could not build a wagon because he had only one wagon wheel. He had a complete set of gear wheels for a watch, but it was impossible to construct a timepiece because he had not secured a case to hold the wheels in the proper interrelationships. The poor man finally built a wheelbarrow because he had a wheelbarrow wheel and not much else was required. (Actually he had seventeen wheelbarrow wheels but could find use for but one wheelbarrow.)

Gathering traits, qualities, and abilities to be used as the basis of an educational program is like buying materials to build a schoolhouse before there is a blueprint of the proposed structure, or, to be more accurate, without recognizing that there is such a thing as a plan. Glass brick has a modern flavor. We select some glass brick, and, since we want people to understand that we are building a modern structure, we double our purchase. Stone is rather conservative, but there is a conservative element in our community so we buy a little stone. Not very much, but enough to placate our conservative friends. And so it goes, buying some of this because we like it or it is novel, some of that because it is a traditional stand-by, and with never a thought to the desirability of first planning the structure.

It takes little imagination to visualize the inadequacies of a building constructed through such illogical procedures. However, most of our educational programs are based upon similarly inadequate plans. This is a serious indictment. It shows one of the major weaknesses in educational programs as they are presently constituted and it indicates that until we have something more effective than lists of traits, qualities, and abilities to describe the competences to be produced by the education our programs are not likely to improve.

Thus, the production of usable descriptions or blueprints of competence is the first knotty problem to be met before proceeding with program improvement.

THE ELEMENTS OF THE COMPETENCY PATTERN

It is now possible to describe the elements necessary in a blueprint of competence—the Competency Pattern.

As is evident from the previous considerations of the importance of the theoretical aspects of behavior, our blueprint will need to be based on theory. This is really the stabilizing element which ties the pattern to social values and makes possible consistency and comprehensiveness in their larger connotations.

Competence must also be stated in terms of the job to be done. Within any given job there are numerous sub-jobs or tasks, to which degrees of importance may be assigned. In this manner it is possible to select out and deal with the "critical" tasks of the job and not become completely inundated by trying to pattern a flood of minute unselected bits of behavior. Therefore descriptions of critical tasks constitute a second major element of the blueprint for competence.

Third is the matter of the skills, knowledges, and understandings necessary for the job performance. These may be placed together as the personal equipment of the worker and called "know-how." Know-how seems to fall logically into two groupings: (1) specialized know-how, which applies specifically to the job under consideration, and (2) basic know-how, consisting of broad general understandings, tools, and methods applicable to all areas of living.

Finally, and of equal importance, comes the factor of relationships. As has been previously emphasized, the Competency Pattern gets its coherence and also its flexibility from the varying relationships between the different elements as behavior alters according to the problem situation.

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CHAPTER 10

Basic Structure of the Competency Pattern

The preceding chapters have continuously emphasized that competence is quality behavior, and that quality is to be observed, considered, and evaluated as patterned relationships among the specifics of behavior. Also, many ideas relating to behavior patterns—their basic assumptions, their nature, their organization and structure—have been rather fully explored.

At the conclusion of Chapter 9 the basic elements of theory, job tasks, and know-how necessary for the description of the Competency Pattern were presented. These are the concern of four consecutive chapters beginning with this one, which is devoted to theory as the pattern's foundational structure.

In previous discussions some specific application has been made to the field of educational administration. Most of the presentation, however, has been in general terms quite applicable to any sort of job. In this chapter and the next three the application is directed entirely at the job of the educational administrator, in order to give the reader an example of a particular competency pattern. In examining this description the reader will need to keep in mind a number of assumptions treated in previous chapters and accepted as valid by the authors. Without them it will not be possible to judge the *comprehensiveness, consistency,* and *workability* of the pattern herein presented.

The Competency Pattern concept is, then, ready to undergo a crucial test, summed up in the following question: Will the concept retain its structure and unity when the elements of theory, job tasks, and know-how are expanded to the degree of specificity necessary for actual use in describing educational administrative competence? This chapter begins the process by presenting such an expansion of the theory portion of the pattern.

THE FOUNDATION OF THEORY

Our theory is founded upon those postulates basic to the social organization of the American culture and indicates adherence to the democratic form of social organization. An examination of the relative merits of the various types of social organizations, or a defense of democracy, is not within the province of this study. The postulates of democracy are used as the basis for the Competency Pattern because they are widely accepted in the American culture and in the American system of education. Regardless of exceptions, confusions, and perversions that may be noted, they are considered the guiding principles of behavior in the American way of life, not only in government but also in business, education, industry, and labor. This statement, of course, assumes that a society operates best when its members follow a single basic theory in all affairs that require coöperative human effort.

THE BASIC DEMOCRATIC ASSUMPTIONS

Some of the basic assumptions of democracy have already been listed. At this time an expansion is needed to portray the specific ideas used as reference points for the remainder of the Competency Pattern.

The democratic ideology has been expressed in many different ways, although in substance all formulations of it are similar. The following quotation from Smith, Stanley, and Shores presents a concise and representative statement of the ideals of American democracy:

> The heart of the American value-system [democracy] is faith in and respect for the common man—that is, for the individual irrespective of his religion, color, occupation, political views, or social position. Respect for the individual does not mean that any one is to be free to exploit his fellows, whether through the subtle processes of the industrial and economic systems or through the more obvious processes of outright suppression by physical force. On the contrary, respect for the individual may, and in fact does, require that some individuals and social groups be deliberately prevented from following social, economic, and political practices harmful to the public. Faith in, and respect for, the common man imply: that the physical and cultural conditions into which an individual is born shall be such as to enable him to develop to his fullest capacity; that an individual shall share in the formulation and fulfillment of the policies and programs under which he shall live and work; that an individual shall not be used merely as a means to the ends desired by others—or, to put the same idea positively, that the individual shall share in determining the ends he shall serve as well as the means he shall employ; and that an individual shall not be required by social circumstances to live in a state of chronic economic insecurity. . . .[1]

Smith, Stanley, and Shores are educators and write of democracy from that viewpoint. However, a political scientist, Charles E. Merriam, has written the following statement of the ideals of American democracy, and his ideas closely parallel those given above.

1. The dignity of man and the importance of treating personalities upon a fraternal rather than upon a differential basis.
2. The perfectibility of man or confidence in the development more fully as time goes on of the possibilities latent in human personality, as over against the doctrine of fixed caste, class, and slave systems.

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[1] B. Othanel Smith, William O. Stanley, and J. Harlan Shores, *Fundamentals of Curriculum Development* (Yonkers-on-Hudson: World Book Company, 1950), p. 106.

3. The gains of civilization and of nations viewed as essentially mass gains—the product of national effort either in war or in time of peace rather than the efforts of the few.
4. Confidence in the value of the consent of the governed expressed in institutional forms, understandings, and practices as the basis of order, liberty, justice.
5. The value of decisions arrived at by rational processes, by common counsel, with the implications, normally, of tolerance and freedom of discussion rather than violence and brutality.[2]

Thus democracy, composed of a few basic ideas and assumptions, provides the values which underlie the pattern of competent human behavior. One reformulation of the democratic ideology may provide the proper perspective needed by this foundation.

Democracy assumes that:

1. Paramount value is placed on the dignity and inherent worth of each individual.

2. All who are influenced by a decision should have an appropriate part in its determination and in its implementation.

3. Every individual is obligated to become reliably informed concerning social problems and to act with others in their solution.

4. Actions, both individual and group, should be based on the method of intelligence rather than upon intuition, revelation, authoritative decree, or impulse.

5. Both social and individual development of the best kind is realized through calculated evolutionary means rather than through expediency or revolutionary violence.

6. Freedom of action is not laissez-faire license, but rather is earned as the result of increasing individual and group responsibility for the results of action.

The tenets of democracy have been spelled out in considerable detail because they have the important task of acting as guideposts and evaluative criteria for the rest of the Competency Pattern. A slight digression, in the form of an example, illustrates this action. Suppose an educational administrator believes that human character is fixed by biological inheritance. Aside from being indefensible, this notion is also undemocratic. For if an individual's character is fixed by the genes and chromosomes, he cannot improve, and the idea that some persons are by nature morally superior is given credence. Both these ideas are contrary to democratic principles, which assert the improvability of man. This understanding, then, is not tenable when evaluated by democratic precepts. It would not be included in a training program, and if already possessed by the prospective or in-service administrator it would need to be dispelled and replaced by a more democratic understanding.

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[2] Charles E. Merriam, *What Is Democracy?* (Chicago: University of Chicago Press, 1941), p. 8.

The above illustration demonstrates the kinds of internal workings which must go on within the framework of the Competency Pattern if it is to maintain unity and consistency. Of course all understandings cannot be labeled democratic or undemocratic. An educational administrator may have an understanding which causes him to value a pocket watch above a wrist watch. This understanding, however, is neutral with regard to democracy and no evaluation is possible or needed.

THE THEORY OF EDUCATION

Any culture that hopes to perpetuate itself must be concerned with transmitting or passing on to the rising generation a particular way of life. This applies to autocratic as well as democratic societies. Any theory regarding the functions of public education in America needs to include the task of transmitting a way of life. Perhaps it may be said that schools were invented for the purpose of assisting in the transmittal process. Of course schools are not the only means of initiating the rising generation into the ways of the culture. The home, churches, clubs, community pursuits, and other activities, both organized and unorganized, all play important roles in the process.

It may be stated, in passing, that the schools have been criticized because, once they have adopted a body of subject matter currently pertinent in the culture, it tends to persist—even after it no longer represents accepted values in a society of a given place or time.

> If, as appears evident, the schools be concerned with transmitting a way of life, then one should be able to look at the schools and see mirrored there the more important aspects of modern culture. Instead, one finds a conglomeration of many ways of life that have been handed down all the way from early ages to the present. The result has been to produce a state of confusion to a point where it is difficult to discern what is meant by "our way of life." *The crying need of today is for re-examination of our present culture and of the school program, toward the end of bringing the two into harmony.*[3]

Such an examination would undoubtedly show that, among other things, our American culture is characterized by the important valuation placed upon democracy and democratic processes. Obviously, then, the rising generation should thoroughly understand the meaning of democracy and the rights, duties, and responsibilities of every individual living within such a social organization.

Thus, a primary function of education is to provide experience which will enable the learner to grasp the values, skills, understandings, and know-how that are the substance of the culture of his society. Although no individual can possess all the accumulated knowledge and skill contained in a modern culture, there are important, "big" ideas in all the disciplines, or organized bodies of knowledge, that every individual needs to understand.

If, however, nothing is done over and beyond the mere transmission of the culture, there will be no improvement. Although some hold that a critical evaluation of the culture is outside the province of the public school, the consensus seems to be that education has the further important function of providing for evaluating, extending, and improving the way of life. If improvement-of-a-way-of-life is accepted as a valid function of public education, there immediately follows the logical question concerning the nature of progress. Through what process and procedures has civilization advanced?

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[3] Gordon O. Wilber, *Industrial Arts in General Education* (Scranton: International Textbook Company, 1948), p. 6.

> . . . . A study of the past seems to indicate that, basically, there is but one method [of making progress]. Society advances only through the development and practice of critical thinking. Whenever there is progress, whether it be in the field of technological inventions, social advance, literature, arts, or any other field, someone has taken a step beyond present knowledge. He has formulated a [an] hypothesis and acted upon it. In other words, he has projected his thoughts one step into the "dark" through the process of critical thinking [the scientific method].[4]

For example, Eli Whitney became concerned about the lack of interchangeability of parts in military rifles and the great amount of time required for the gunsmith to turn out a hand-made firearm. He gathered information and from these facts he guessed (formulated the hypothesis) that with machine tools and improved methods of mensuration the parts could be made interchangeable. He further hypothesized that if the mechanic produced but a single part for the arm his skill would become such that the parts would be produced much more rapidly. He tried out the hypotheses and his success laid the foundation for modern methods of mass production.

Another example may be cited from the work of Henry Ford. He used Whitney's production methods but encountered an assembly problem. There were confusion and lost time in bringing the parts to the frame and assembling the automobile. Ford thought critically about the problem and guessed that the process might work more successfully if the frame was carried to the parts—each in turn being added until the car was completed. This hypothesis resulted in the production line. It would be generally granted that the results of these examples of critical thinking represent progress.

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[4] *Ibid.*, p. 8.

This interpretation of the nature of progress possesses important implications for education. If the scientific method is the best method yet discovered for solving problems and making progress, then a major aim of all education should be to promote every student's skill in its use. In a democracy this skill is doubly important because progress is group progress and can be no more rapid than the sum of the critical thinking of the individuals who make up the society. Members of the Southern States Cooperative Program in Educational Administration concur in this view when they indicate that the primary function of American public education is: "To provide opportunity for all the community's citizens to develop intelligently and cooperatively the proper 'know-how' through the solution of appropriate problems in the various areas of living." [5]

Thus, in addition to transmitting the culture, the school has a second important function, built upon critical thinking and the use of the scientific method in problem solving. It may be stated as a three-part progression:

1. To provide experience in the use of the problem-solving method.
2. To provide group experiences in the use of the method so as to teach the value of coöperative effort in solving common problems.
3. To directly and indirectly contribute to improving the culture through teaching critical evaluation of the ongoing cultural pattern.

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[5] Southern States Cooperative Program in Educational Administration. *Tentative Progress Report on Planning for the Study of Preparation Programs in Educational Administration* (Nashville: SSCPEA, 1952), p. 25.

THE FUNCTIONS OF EDUCATION IN "MEETING THE NEEDS"

"To meet the needs" has become almost a cliché in modern educational writings. Much that is done in educational programs is justified on the basis of "meeting the needs of students," and many things are criticized because they are said to fail to "meet the needs of the learners." What validity does "meeting the needs of students" have when the phrase is viewed in the light of the democratic and educational assumptions which form the foundation of a competency pattern? What are some of the theories of needs, and will any of these theories allow juxtaposition with the previously stated foundational items, providing increased scope and strength, and not showing fundamental conflict with any of them?

Members of one school of thought, either consciously or unconsciously, view needs according to the philosophy of Rousseau. This philosophy is expressed in the theory that the felt needs and interests of the child provide adequate guides to his developmental requirements.

> . . . Rousseau advocated a system of education based on the proposition that sound development is a process of unfolding from within, instead of imposition from without. Patterns or standards for development were asserted to inhere in the nature of the individual. Pupils, therefore, were to learn in accordance with the promptings of their own interests and desires, without coercion or prescription. This was [is] called education according to nature. Follow nature and the capacities of the individual for truth, goodness, and beauty will automatically come to full fruition.[6]

Just as a grain of wheat, given the requisite "natural" environment of light, water, and nutrients, will produce a fine wheat plant, so it is with the child; when properly nurtured and protected from the distorting effects of social pressures, he will develop into a fine specimen of humanity and exhibit the valued qualities implied by the term *human*. Implementations of this philosophy have led to such developments as the "child-centered school" and the "goal-less school."

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[6] Boyd H. Bode, *How We Learn* (Boston: D. C. Heath and Company, 1940), p. 41.

> It is generally recognized, however, that Rousseau's solution . . . was too simple. . . . From the standpoint of modern psychology the trouble with Rousseau's point of view lies in the doctrine that minds are provided with fixed inner patterns which will direct development if they are permitted to do so. There is a vast difference between saying that man has capacity for beauty, goodness, and truth, and saying that the development of this capacity is directed from within, as the process of hatching an egg is directed by the nature of the egg. . . . Sound development requires constant restraint, regulation, direction, which must be supplied by the individual himself, as a matter of conscious effort and through the exercise of intelligence. . . . We can permit an egg to hatch in its own way, because this is not an educational process. . . . For this latter process nature provides no pattern. Man is equipped with reason or inteligence for the very purpose of enabling him to take charge of his own destiny.[7]

Modern thinking and experimentation, both in psychology and in biology, seem to further repudiate Rousseau's theory of development from within. It is doubtful that a child, properly cared for physically but reared without any contact with society, would exhibit any of the characteristics which distinguish humanity. Doubtless the human organism has many capacities, some of which may be as yet undiscovered. However, the highly valued capacities seem to relate to behavior, not in isolation, but in association with others, and since this is social behavior its development is possible only in a social context.

It may be further indicated that some needs, defined as the felt needs and interests of the child, à la Rousseauism, will be in conflict with some of the postulates of the modern definition of democracy. Since democracy forms the basis for the Competency Pattern, the inclusion of such a conflicting theory of needs is not permissible. It is true that Rousseau wrote in the interest of individual freedom, but such a laissez-faire freedom as he describes would certainly bring into open conflict the felt needs experienced by various associated individuals. His theory says little about the individual responsibility which is inherent in any social scheme for individual freedom. Furthermore, democracy holds that the individual may be improved through various social media. This belief contradicts the idea that what a person will be is controlled entirely by the cell structure formed at the time of conception.

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[7] *Ibid.*, pp. 42–43.

Another group, taking their cue from the belief that education is preparation for future living, propose that needs be determined by looking at adult society. From noting what adults do the school will have the basis for a curriculum designed to prepare youth for those activities in which they will some day engage. This point of view is implemented in what has been called the "scientific movement" in education. A great many studies were made to find these supposed needs of learners—to discover the most used words in the adult world so that the learner would be familiar with the language when he became an adult; to determine the arithmetical calculations used by businessmen with the idea that the learner could prepare for a future career in business. Through the use of such scientific studies educators hoped to find the exact knowledges, skills, and habits needed for successful living. Once found, these would become the school's curriculum, and learners would be instructed and drilled until they were letter perfect.

In educational circles it is generally recognized that this conception of learner needs is too narrow and is based upon fallacious assumptions, one of which holds that the essence of perfect human behavior is somehow structured in the universe. This notion has it that if close enough scrutiny is given to the way people act it will be possible to discover the essential elements and to use them to construct the school's curriculum. "Scientific" observation will reveal the way the majority of people react to a given situation. That is, if the majority of people use the multiplication tables then these tables are an essential element in meeting the needs of the learners. If very few people use the word "verecund" it is nonessential and is not considered a "need." Hence the search for the "essential" reading words, spelling words, arithmetical calculations, and the like. Another important, although erroneous, concept comes from the psychological idea that all human behavior is of a simple stimulus-response nature, i.e., habits; after the essential needs have been discovered it is imperative that the learner be drilled in the habit responses required to meet such needs.

When placed beside the democratic elements of the Competency Pattern foundation, this theory of educational needs rests uneasily. It does not take into account the dignity and worth of the child as such but thinks of him only as a future adult. It is not interested in helping the learner develop ability in critical thinking but aims to prescribe the formation of nonthinking habits. In the interests of the criterion of consistency, this concept of needs, therefore, is ruled out and may not be used in the Competency Pattern theory of education.

Modern educational theorists are turning more and more to the basic sciences for a determination of the needs of students. Biology, psychology, and other sciences have well established the fact that the human organism seeks to achieve a state of equilibrium. There seem to be certain basic unbalancing factors common to all cultures, and the activities necessary to restore the organismic balance have been called the basic human needs.

"Among the basic needs that have been identified are food, sex, shelter, protection, growth, training, hygiene, movement, and social recognition." [8]

As stated more completely by Theodore Brameld:

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[8] Smith, Stanley, and Shores, *op. cit.*, p. 258.

Most men do not want to be hungry: they cherish the value of *sufficient nourishment.*

Most men do not want to be cold or ragged: they cherish the value of *adequate dress.*

Most men do not want uncontrolled exposure either to the elements or to people: they cherish the value of *shelter* and *privacy.*

Most men do not want celibacy: they cherish the value of *sexual expression.*

Most men do not want illness: they cherish the value of *physiological* and *mental health.*

Most men do not want chronic insecurity: they cherish the value of *steady work, steady income.*

Most men do not want loneliness: they cherish the value of *companionship, mutual devotion, belongingness.*

Most men do not want indifference: they cherish the value of *recognition, appreciation, status.*

Most men do not want constant drudgery, monotony, or routine: they cherish the value of *novelty, curiosity, variation, recreation, adventure, growth, creativity.*

Most men do not want ignorance: they cherish the value of *literacy, skill, information.*

Most men do not want continual domination: they cherish the value of *participation, sharing.*

Most men do not want bewilderment: they cherish the value of *fairly immediate meaning, significance, order, direction.*[9]

Although society may be said to exist primarily for the purpose of assisting in the fulfillment of basic individual needs, by their very operational nature social organizations give rise to a great variety of additional needs which may be called "induced." For example, shelter is a basic need and many activities have been developed in the interest of meeting it. Elaborate structures have been built which required specialized planning abilities, construction skills, tools, transportation, finance, selling, and the like.

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[9] Theodore Brameld, "An Inductive Approach to Intercultural Values," *The Journal of Educational Sociology*, September, 1947, pp. 10–11.

These represent important and valid needs to individuals engaged in the various phases of the housing industry. They become as important as the basic needs to the social existence of those individuals. Thus needs seem to multiply, and in the fulfillment of one, several more may be created. However, this fact does not preclude the consideration of student needs or relieve the school from responsibility for meeting them.

The Committee on the Function of Science in General Education investigated the findings of science relative to the needs of students and concluded that these needs fall into four rather definite areas of living, as follows:

I. Personal living.
    A. The need for personal health.
    B. The need for self assurance.
    C. The need for a satisfactory world picture and a workable philosophy of life.
    D. The need for a range of personal interests.
    E. The need for esthetic satisfactions.
II. Immediate personal-social life.
    A. The need for increasingly mature relationships in home and family life, and with adults outside the family.
    B. The need for successful and increasingly mature relationships with age mates of both sexes.
III. Social-civic relationships.
    A. The need for responsible participation in socially significant activities.
    B. The need for social recognition.
IV. Economic relationships.
    A. The need for emotional assurance of progress toward adult status.
    B. The need for guidance in choosing an occupation and for vocational preparation.
    C. The need for wise selection and use of goods and services.
    D. The need for effective action in solving basic economic problems.[10]

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[10] The Committee on the Function of Science in General Education, *Science in General Education* (New York: D. Appleton-Century Company, 1938), pp. 64 ff.

Krug also notes four groups of needs, although they are somewhat different from the Science in General Education listing:

1. Belongingness.
2. Participation.
3. Status, or recognition.
4. Security.[11]

Raths identifies eight emotional needs of children:

1. The need for belonging.
2. The need for achievement.
3. The need for economic security.
4. The need for freedom from fear.
5. The need for love and affection.
6. The need to be free from intense feelings of guilt.
7. The need for sharing and self-respect.
8. The need for understanding [the world in which he lives].[12]

These listings illustrate how the basic sciences are helping in the task of need identification. No effort will be made at this point to evaluate their validity; they are presented simply as representative modern statements.

In further consideration of needs, what do biology, psychology, and sociology say concerning the nature of the individual and the character of his needs?

The biologist sees the individual as a living organism acting and reacting with, and within, his environment. Each organism is in some ways unique and different from his fellows, but all are dynamic beings wanting to do the things necessary to meet their needs. Certain things are necessary for survival, growth, and perpetuation of the species. These biological "needs" require an adequate intake of the proper nutrients, protection from serious trauma, protection from the elements, defense against disease and invasion by harmful microörganisms, opportunity for growth and development, and reproduction.

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[11] Edward A. Krug, *Curriculum Planning* (New York: Harper & Brothers, 1950), pp. 35–37.

[12] Louis E. Raths, *An Application to Education of the Needs Theory* (Bronxville: Modern Education Service, 1950), pp. 6–17.

The modern psychologist also sees the individual as a unified organism. This view is somewhat different from the older psychological notion which regarded the body as a mere passive collection of protoplasm and the mind as a nonmaterial substance that did the body's thinking and feeling and in general pushed the body around to do its (the mind's) bidding. In his study of behavior the psychologist notes that this human organism is a purposing and problem-solving being. It can get understandings and do critical thinking through the seeing of relationships. It has emotions and feelings, can develop habitual action patterns through which a great many activities are carried on without the need of the higher processes of thinking, and is a multi-potential organism, born with certain inherited characteristics but capable of development and growth in a variety of directions.

The sociologist and the anthropologist find the human organism capable of using coöperative techniques in the solving of problems relating to needs. These techniques take the form of organizations and social institutions designed to provide services or to function in some manner considered essential to the general success of the total society. Such working together at common purposes requires common understandings, and to this end many techniques of communication have been developed. In all activities the human organism is an inventor and a user of tools ranging from the simple rock-in-hand hammer to the big conceptual tools of research and the scientific method—which are in reality inventions to serve the purpose of making inventions. Man has invented a method of inventing.

Thus, in considering the needs of the human organism as a unit in the larger context of a modern society, the sociologist might compile the following list:

1. The need to work with others in the utilization of natural resources.

2. The need to understand and appreciate the evolution and development of the various social institutions.
3. The need to understand and make mutual adjustments with other people.
4. The need to communicate and exchange ideas.
5. The need to procure a livelihood.
6. The need to participate effectively as a citizen.
7. The need to maintain individual and group health and safety.
8. The need to improve home and family living.
9. The need to maintain and improve educative institutions.
10. The need to meet individual and group religious requirements.
11. The need to participate in the enjoyment of aesthetic creations, both as an observer and vicarious participant and as a creative worker.
12. The need for relaxation and recreation.

The preceding listings and discussion on the subject of student needs represent an effort to show the great variety of recognized human needs, both basic and derived, and to reveal the necessity for clarification regarding the school's role in meeting them. Is it the school's function to meet all human needs, and if not, which if any of them should it meet?

In this connection, it is assumed that the primary function of the school is to give people the skills and methods of thinking which will enable them to act intelligently in their daily living. As previously quoted: "The primary function of American public education is to provide opportunity for all the community's citizens to develop intelligently and cooperatively the proper 'know-how' through the solution of appropriate problems in the various areas of living." [13] At the risk of oversimplification, it may be said that the function of the school is *to improve the degree of intelligence with which people act*. Thus the need to act with intelligence may be recognized as a very important human need, and one which is the initial concern of the public school.

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[13] Southern States Cooperative Program in Educational Administration, *op. cit.*, p. 25.

Modern society has many institutions, including the school, which are designed and organized to meet the needs of its members. At times, however, some of the institutions may fail to fulfill all the functions for which they are responsible, and the inoperative functions must be assumed and served by other institutions. This is a necessary though frequently unfortunate situation, for as an institution is forced to assume functions for which it is not chartered, designed, or properly equipped its own legitimate functions are weakened. For example, "the need for proper nutrition" is universally recognized, and as society is organized at present, the satisfaction of this need is a function of the home—not the school. In this connection the school's concern is with intelligent thinking and acting relative to the general problem of adequate and proper nutrition. Furthermore, if the home is not providing nutrition, the school may be forced to do so. This may not be a defensible function of the school, and it does impose an added burden, but it does not preclude school activity in the area of nutrition. All kinds of experiences and problems relating to foods, food preparation and serving, vitamins, menus, food sanitation, and the actual feeding of students may be rightfully undertaken. However, such activities are pointed toward the objective of getting people to think and act intelligently when confronted by the problems of proper nutrition; i.e., they constitute a school function. They are not attempts to replace the home in its function of actually providing food for its members.

Consider the institution of medicine, which is charged with maintaining healthful living. In this area the school finds its function in teaching people to think and act intelligently in matters of mental and physical health. It logically gives its learners guided experience and practice in solving problems connected with health. Many other examples of this kind may be found in a modern society. There are many and varied institutions, and each has the function of meeting one or more of the human needs: agriculture to produce food and fiber, industry for processing the various raw materials, the transportation system for the movement of goods and people, governmental institutions for an orderly society, churches to meet religious needs, and the home to provide the basic social unit and to perpetuate the species.

When built upon democratic postulates, such as undergird this theory of education, the school may rightfully consider the activities of the various other institutions. In fact, it is logically required to do so. For in a democracy all people are expected to share in the decision making, and this in turn calls for an understanding of the culture and the ability to deal sensibly with problems. Herein lies the primary duty of the public school—to give its charges experience and practice in acting intelligently. Of course, to act with intelligence requires "know-how," and the school must do a great deal of teaching to that end. However, it will be perceived that know-how *per se* is not a justifiable objective. Just as the carpenter does not teach his apprentice to use a hammer but instructs him in using a particular hammer in a certain way, to do some needed operation, so the school will not teach its learners to read but will enlighten them in the use of the tool of reading in the accomplishment of purposes. It is neither logical nor sound educational practice to teach the techniques of a tool such as reading and, when the reading ability is perfected, *then* to teach how to use the tool to some desired end. The use of the tool and the tasks for which it may be employed should be concomitant learnings.

Closely allied with the concept of "meeting the needs of students" is the notion that the primary function of public education is to meet the needs of the community, or, as it is more frequently stated, "the improvement of community living." However, this idea of the school, as an instrument for the improvement of community living, is easily misunderstood and may lead the school into difficulties.

At this point a modern definition of the composition of a community may clarify the discussion. As shown in Chapter 8, a community has been defined and pictured in a number of ways. For example, an earlier notion considered the community a group of people bound together by the geographical aspects of the terrain. Mountain ranges, rivers, climate, the sea, fertile lands, and other features entered into various combinations which caused people to come together in "natural" communities. Another concept holds that the community is made up of individuals with similar ways of living, i.e., habits, beliefs, and patterns of thinking.

With improved ways and means of communication and transportation the idea has developed that the community is to be defined largely in terms of institutions. That is, a concentration of population is in reality not a single community but many communities. Each individual is a member of several communities and each community is composed of a service institution and its participating members. For example, a large metropolitan newspaper is an institution designed for the collection and dissemination of news and information. Its reporting organization and its community of readers may spread over a radius of hundreds and even thousands of miles. However, in the modern sense they form a community of people engaged in a coöperative enterprise. The same sort of relationship may be discovered in the other institutions. There are medical communities built around health needs, buying and selling communities, recreational communities, religious communities, manufacturing communities, educational communities, and so on through the many institutions which serve the needs of a modern culture. In a sense, all the community institutions have a delegated function with respect to the "improvement of community living." The "American way" seems to indicate a belief in the possibility of doing things in bigger and better ways. More efficient and rapid means of communication are developed, new and improved manufactured goods are produced, medical procedures and health measures are made better, and more and better food products and housing facilities are made available.

From this point of view, what is the school's role in the general task of improving community living? Is the school to be a kind of stand-by institution which may be thrown into the breach whenever one of the other institutions falters in carrying out its functions? If the churches are not successfully fulfilling their community improvement functions, shall the school go into the business of religion; if the farmers are not producing food for the community, shall the school establish farms; if the community has no medical facilities, shall the school improve community living by building and operating a hospital and medical center?

It is not the purpose of the school to compete with or try to carry out the functions of the other institutions. The school has enough to do in meeting its delegated function of giving experiences in the areas of know-how and critical thinking without taking on added burdens. Since critical thinking is believed to represent the best method of improving community living, since the giving of guided experiences in critical thinking is an important function of the school, and since people do not just learn to think critically but must think *about* something, the part to be played by the school in the improvement of community living seems to be rather clearly indicated. The school is to guide its learners in critical thinking regarding the various institutional communities of which they are members. In this way it discharges its obligation with regard to reflective thinking, at the same time making education "life-centered" by the use of currently important problems. And finally, general community living is improved because of the evaluation done by the members of the school community.

As was noted in the discussion of student needs, the above ideas regarding the function of the school do not preclude the school's use of many of the activities engaged in by other institutions. As a problem-solving laboratory the school will need to have these activities, but for a different purpose. That is, the farmer engages in agricultural pursuits to produce food and fiber; the school, to create a situation wherein the student may learn to think more effectively about the purposes, problems, and know-how of agriculture. Similar examples could be drawn from each of the community institutions—health activities for solving problems in that area, industrial activities for understandings in that area, and so on.

At this point it may be mentioned that, democratically speaking, the people may design or cause to evolve any kind of institution they think will be of service. Historically, schools have served purposes other than those mentioned above. At some future date they may have functions quite different from their current ones. At the present time, they are called upon to meet two important and related needs or purposes:

1. To aid in transmitting the culture.
2. To enable learners to develop the know-how and reflective thinking abilities necessary to successful living and the improvement of a way of life.

The foregoing discussion is by no means a complete educational theory. It is used to demonstrate the workings of the ideas portrayed by the Competency Pattern. It will be remembered that the Competency Pattern starts with a few basic beliefs that are the substance of democracy. The theory of education follows and is constructed on the premise "Believing this (about democracy) we must logically do this (with regard to education.)" It has been shown in the theory of education that not all notions about education are compatible with the basic ideas of democracy, and a brief attempt has been made not only to show the logical and defensible functions of a program of public education in a democratic society but also to demonstrate an important reason for having a competency pattern. The theory of education must be a theory that can stand evaluation in terms of democracy. Some of the contradictions are rather obvious (such as education for special caste) while others are more circuitous and subtle (such as that a man's moral possibilities are determined by the accident of birth).

THE THEORY OF EDUCATIONAL ADMINISTRATION

This chapter started with an interpretation of the basic tenets of democracy and has progressed through a discussion of the functions of a program of public education based thereon. The next, and last, logical step in the foundational structure of the Competency Pattern is the development of a theory of educational administration for the realization of the functions of public education. This calls for a close look at the nature of administration in general and educational administration in particular.

Administration is always identified with the problem of overall or group management of persons and materials. Anarchy is supposed to be a state in which there is no need for such management since each person is ideally in complete command of his own affairs. History seems to limit anarchy to brief periods of unexpected disaster when the morale or cohesive force of the group was temporarily broken or when the same effect was gained by the sudden release of the group from dictatorial restraint. In either case the unbearable limits to freedom imposed by the necessity for the individual to spend his complete energies in self-protection caused an immediate return to some form of group management. It is true that when the cohesive force of the group is broken its personnel may not rally again around the ideas or the persons in which they once found unity. But rally they will, and again around ideas or persons, although they may tend to gather in smaller groups and thus lose the efficiency of operation gained through identification with the larger group.

Thus it is that people always seek identification with groups to find freedom to produce and to enjoy. And therein lies the need for management, since the group must find common goals, common rules to follow, and coördination of effort in following the rules while seeking the goals. It is management's problem to help with these.

Although it is easy to reach general agreement that management has the particular role of helping the group with the establishment of goals and rules and with providing necessary assistance in the coördination of execution, it is not yet clear how this role is to be played. The rights, duties, and obligations of management, or of administrators, are vastly different as conceived in different cultures and even throughout our own. Perhaps it would be wise at this point to examine some of the basic concepts of power and authority which account for these differences.

From the point of view of the modern psychologist it is natural for people to desire to influence others. Very early in a child's life he learns that others respond to him positively if he shows affection for them or if he does something which is seen by them as good or useful. Thus at an early age he begins to build true concepts of the two positive sources of personal power or influence over others. The first of these is a *respect* for him, which is grounded in frequent exhibitions of his competence. He is a person who can do many things well; i.e., his table manners are good, he is the best first baseman in the fifth grade, he is very good in arithmetic, and he can take his bicycle apart and put it together again. The second source of personal power or influence is an *affection* for him, which is grounded in "getting along with others" or treating others according to correct social standards. He is becoming a person who is a good social being; i.e., he is a good sport at play, he is courteous in home and school, he doesn't seek unfair advantages in trading, and he isn't a "tattle-tale."

If respect and affection, these positive sources of influence, were the only ones to be considered, the administrative millennium would, indeed, be at hand. Unfortunately there are potent, maybe equally powerful, negative sources of influence. The first of these is *disrespect* of a person, which is induced by his bumbling and incompetent action. He is seen as a person who just can't seem to do anything well; i.e., he couldn't make the ball team, he always gets low grades, and he doesn't keep himself clean. The second negative source of influence is *fear* of him, which is grounded in frequent attempts on his part to coerce and manipulate others. On many occasions he "didn't get his way" so he tried to influence others, and often succeeded, with bribes, physical violence, or threats or promises; i.e., he threatened to tell mother, he said there was a rule against it, he threw a temper tantrum, or he punched someone in the nose. *Passivity,* the third negative source of influence, is closely allied to fear. In fact it may be properly viewed as a particular state of fear induced by a long series of frequent and successful attempts on his part to coerce and manipulate others. When bribes, threats, physical violence, or promises have succeeded over a long period of time the individuals under the influence of fear may passively do the bidding of the person or persons they fear. The techniques of inducing such a state of fear were aptly illustrated in the "brain washing" carried on by the Russians during the Korean War. Our child has some sense of this source of influence from his early group experiences. Few have escaped acting the bully or being acted on by such in childhood. And where the bully prevailed over a period of time others in the group had a taste of passivity as a negative source of influence. They learned to accept the feeling that they must do the bidding of the bully or else.

The foregoing discussion has sought to develop a concept of sources of influence or power over others and to show how these manifest themselves in early childhood. The importance of these notions is increased by the knowledge that psychologists are placing more and more emphasis on the influence of childhood in structuring the personality. If we are to educate for respect and affection, the positive sources of influence, it now appears that great efforts should be directed toward the early years. Perhaps much of the effort now so spent on the graduate level is largely useless.

Our present concern, however, is with the administrator engaged in the overall management of persons and materials. What does this matter of sources of influence over others mean for his role? Undoubtedly it is of first concern. When an administrator possesses (1) the respect of the staff because he is competent in action and (2) their affection because of his honesty, fair dealing, and interest in each individual member of the staff, his positive influence is at a maximum. In this situation conditions are permissive also for the maximum development of respect and affection among all members of the group. The psychological need of the administrator to influence others is satisfied and the same tends to be true of his staff.

Contrast this situation with one in which the administrator is (1) disrespected because of his bungling incompetence and (2) hated because of his coercive and manipulative tactics with the staff. Here all the influences are negative. The administrator's influence from positive sources has practically disappeared, and as this happened the psychological need to influence others was so enhanced that all the weight of his office and all his control over budgeting, salaries, scheduling, and the like were used in attempts to direct the actions of others. Another corollary psychological need activated in this situation is the need of the administrator to feel that the actions of his staff secured by his coercion and manipulation are really expressions of their respect and affection for him. This latter need is alarming indeed, for its fulfillment removes for the administrator an important aspect of reality from the situation, which prevents sufficient self-evaluation of his acts and largely precludes the possibility of a return to action calculated to regain the respect and affection of his staff.

The contrast in administrative operation presented above is admittedly, and for purposes of emphasis, somewhat extreme although such extremes are not unusual and have been witnessed by the most casual observer. Like all contrasts, too, the description does not contain all-important variations. For example, there are administrators who deliberately seek to maintain the affection of staff members by providing protection from simulated dangers from without, giving unwarranted praise, and lavishly bestowing favors. Such unsound attempts to "win friends and influence people" are expediencies having no basis in merit or competence, yet the need of the staff member for recognition may be so great that he is completely blinded by the approach. It is scarcely necessary to point out the dishonesty and demagoguery involved here. On the other hand, it is essential to note that there are strong tendencies to such expediency in administration today and that this kind of action involves a perversion of democratic means and ends.

The discussion of sources of influence or power over others leads naturally to the problem of authority. What is authority? Who has authority? What or who is the ultimate or final source of authority?

One way of looking at authority conceives it to be the directing influence in action. In this sense authority resides in the feeling of rightness of the purposes, objectives, and convictions of the individual or group. The expression "I am my own master" is an individual statement of this feeling of rightness, which carries also implied beliefs in the ability to control oneself and willingness to accept responsibility for the consequences of one's action. This kind of authority might well be called the authority of purpose.

Those concerned with group operation frequently use the expression "The authority is in the situation." Here is an important use of authority of purpose. It refers to the right of members of the group to establish, follow, and be controlled by the purposes which they set in a particular situation.

Under another concept authority resides in or "goes with" a particular job or position. Well-defined and distinctive rights of action constitute this authority. When a person is selected for a job or invested with a position they are his. This concept of authority may properly be called the authority of position.

Without doubt the concept of authority of position is common to our culture but it has wide variations. At its best it is another way of expressing the authority of purpose. In situations where purposes were group created, where the work was divided and positions were established, where persons were assigned to the positions to accomplish the purposes of the group—here the right to act is both an authority of position and an authority of purpose. The common notion of authority of position is quite different. The old "leadership-followship" and "master-servant" ideas are so strong in our culture that it is extremely difficult to view a position in terms of "purposes to be achieved" rather than "person to be obeyed." The person invested with a position is commonly viewed not as one who has rights and duties of a position created to fulfill the purposes of the group but rather as one who has rights and privileges to control others, even their purposes, by virtue of his position.

The usual idea of authority of position is especially important with respect to administrative positions involving functions of general management and control. These positions are naturally viewed as having the most extensive rights and privileges, and the persons occupying them are regarded as the leaders. The leaders have the right to establish purposes, determine policies and plans, evaluate the accomplishments of the group, and command. The others have the right to execute the policies and plans of the leaders and to obey.

The reader will, of course, recognize this concept of authority of position as an undemocratic one. Yet it prevails to a great extent in educational administration today. In fact it is so prevalent in the thinking of school personnel that they have extreme difficulty in understanding that each staff member in the school organization has an authority of position—a particular assignment in achieving purpose—that cannot be dispelled or superseded at the whim of an administrator.

Perhaps a word should be said about the question of "final authority." Under the common conception of authority of position the top man on the totem pole, the head of the administrative hierarchy, is the final authority since the right to change the purposes of the group is his. If, on the other hand, the concept of authority of purpose is accepted, the right to create and change purposes is a common right of all members of the group. Thus the group becomes the final authority or the source of final authority. So long as the group does not change its purposes, these purposes are the authoritative guides for action. No person in the group, and this includes administrators, has any more rights than are inherent in his particular assignment made for the fulfillment of the group purposes.

Up to this point the discussion has dealt with the general nature of administration in an attempt (1) to show how management or administration is a necessity for group operation, (2) to define sources of influence or power and illustrate how these affect administrative operation, and (3) to set forth contrasting conceptions of authority prevalent in our culture which influence administrative processes and define administrative functions in radically different ways.

THE DEMOCRATIC FUNCTIONS OF EDUCATIONAL ADMINISTRATION

Democratic administration is possible when the positive sources of influence, respect and affection, are present and are constantly encouraged. Likewise it is possible when authority of position is rejected and authority of purpose accepted. Obviously the six basic democratic cultural assumptions presented on page 170 are valid only when the group has the right both to determine and change its directing purposes. The most important decisions are those which change the purposes—the directions and objectives—of an enterprise. If an individual cannot share in such decisions it is difficult to see how he can participate in affairs that control his destiny or how he could be said to possess "dignity and inherent worth."

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In the opinion of the authors democratic administration will accept as valid the two purposes of public education set forth on page 188 and will perceive its managerial role—as well as all other roles within the school system—in support of these purposes. All administrative functions—indeed, all school functions—will be directed coöperatively "to aid in transmitting the culture" and "to enable learners to develop the know-how and reflective thinking abilities necessary to successful living and the improvement of a way of life." The administrative role will not be considered superior to teaching, learning, supervisory, or custodial functions. Neither will administration have exclusive control over changes and interpretations of purpose within the commonly accepted purposes of public education. Rather it will be viewed as on a par with other roles within the system but different from the others.

The purpose of the preceding discussion has been to establish a basis for understanding the two functions of democratic educational administration proposed by the authors. Before stating these functions it seems desirable to propose criteria which the functions must satisfy. In effect these criteria constitute a summary, in the form of critical questions, of the elements of administrative theory presented in this chapter. The criteria for functions of democratic educational administration are as follows:

1. Do these functions foster the development of positive sources of influence—respect and affection?
2. Do these functions accept the concept of authority of purpose?
3. Do these functions exemplify the basic tenets of democracy?
4. Do these functions conceive the managerial role as one role among many dedicated to the achievement of the democratic purposes of public education?
5. Do these functions accept the responsibility for democratic school management?

The first of the democratic functions of educational administration is that of *providing opportunity for all concerned to share* *appropriately in the formulation of policies and the development of program plans for the realization of the purposes of public education.* This function makes the administrator responsible for initiative in devising and arranging means and stimulating participation in the making of all decisions which involve in a major way the purposes and directions of the school or school system.

In serving this function, the educational administrator

1. Accepts responsibility for seeing that policies and programs are formulated through the coöperative process.
2. Gives each group (pupils, teachers, lay public) an opportunity to participate appropriately; that is, gives representatives of all groups affected by a policy or program the chance to share in its formulation.
3. Encourages each person to participate.
4. Encourages people to recognize and accept problems.
5. Does intelligent preplanning.
6. Encourages each person to accept for examination the ideas of others.
7. Makes available resources which can contribute to intelligent decisions.
8. Contributes to group thinking as a member of the group without dominating it.
9. Withholds judgment and action, and encourages the group to withhold judgment and action, until all reasonably available evidence is considered.
10. Is willing to accept the decision of the group when coöperatively arrived at through intelligent study.
11. Provides for group evaluation of policies and programs.
12. Seeks to understand his own motivations and help others to understand their motivations as a part of the process.
13. Presents policies and programs for board action after group study.

The second of the democratic functions of educational administration is that of *providing opportunity for all concerned to share appropriately in the execution of policies and program plans seeking the realization of the purposes of public education.* This function makes the administrator responsible for initiative in the allocation of personnel, the provision of materials, and the coördination of effort essential to the performance of all duties within the school or school system.

In serving this function the educational administrator

1. Accepts the responsibility for supervision and coördination in the execution of policies and programs.
2. Translates policy into action at appropriate times.
3. Interprets policies and programs to the public.
4. Makes decisions in line with policies and assists others to do likewise.
5. Assigns responsibility and power to act concurrently.
6. Organizes the school staff to carry out policies and programs in accordance with sound principles of organization.
7. Makes decisions in the absence of policy, but refers tentative policy to the group for review.
8. Adjudicates differences of opinion among staff members seeking the maximum welfare of the individuals consistent with the program of the school.
9. Refers dilemmas involving the welfare of the community to the school board for consideration.
10. Encourages personnel to interpret and carry out their executive responsibilities in close coöperation with others having related responsibilities.

CHAPTER 11

Tasks of the Educational Administrator

As has been made clear in the previous sections, the elements of the Competency Pattern are the *theory*, the *know-how*, and the *job tasks* appropriate to the area under consideration. It was hypothesized that when these elements are properly related competence results. In Chapter 10 a theory was developed which was deemed appropriate for undergirding the job of educational administration as it exists in a democratic society. The present task is to develop a picture of the job so as to point out just what the educational administrator will be doing when he is acting in a competent manner. There is no competence without performance; furthermore and for this reason, it is impossible to describe competence without discussing the actual job to be done. Consider the following description of two young men. They are both fine democratic young men. They both have skills and abilities. They are both holding jobs which require considerable training and which are socially useful. They possess a great many of the traits usually ascribed to competent people—perseverance, good appearance, etc. The important point here is that despite the above-mentioned facts these young men could not exchange jobs and still be deemed competent. One is a pilot for an air line and the other is a teacher of English. Obviously, in order to deal with competence one must include the job task factors for which the competence is to function.

To the end of showing the important tasks included in the job of the educational administrator the present chapter will set down a number of criteria for identifying such tasks and will give illustrations of some of them. These tasks are perhaps more appropriately referred to as the tasks of educational administra*tion*. Educational administration is a large area of important work and contains many tasks, probably so many that no one person could perform every one of them. For this reason when we use the term *educational administrator* it will be in the sense of including the tasks which are the responsibility of educational administration, without necessarily implying that these tasks are to be performed by a single individual.

As was previously noted, it is neither necessary nor appropriate to try to list the multitude of tasks which make up the job of educational administration. It is much more efficient and probably just as effective to list only the critical tasks in this area. Of course, the word *critical* carries certain implications. Anyone will agree that the critical tasks of administration will include those which are important, and without which the program would not function effectively. Therefore, the establishment of some criteria for identifying these critical tasks should precede any effort at getting an accurate and appropriate listing of them.

IDENTIFICATION OF CRITICAL TASKS

In handling a great mass of material, such as would be found in a description of all of the important tasks which make up a large social function (e.g., educational administration), a certain amount of organization is necessary. First, rules must be designated for selecting those tasks which are to be deemed "critical." Second, the critical tasks will need to be arranged in categories so as to facilitate handling.

We do not pretend that the task items will "naturally" fall into various categories and that the big job is to identify the categories. To do so would be to imply that the categories used here are somehow eternal truths which have been discovered and which are essential to the consideration of any group of tasks devolving upon the educational administrator. Such is obviously not the case. The categories used here will simply be inventions designed to enable this group of task descriptions to be assembled into some sort of understandable whole or pattern.

CRITERIA FOR SELECTING CRITICAL TASKS

Competent behavior has been defined simply as high-quality behavior in the performance of a particular job. It follows that the tasks selected as "critical" will include those which are most productive of competent behavior. In connection with the administrator's job performance, several criteria may be noted for identifying the critical tasks.

Before proceeding with the business of listing the criteria for critical tasks in educational administration we may well define "task." A task is a segment of a job sufficiently distinct (possessing organismic wholeness) to be identified by a qualified observer, and its performance may be judged as being conducive to the overall successful performance of the job of administration. A critical task is one whose nonperformance will be detrimental to the outcomes needed for successful educational administration.

To return to the selection of criteria for the listing of critical tasks: First, the critical task is an identifiable unit of behavior—a segment of behavior possessing a certain degree of organismic wholeness. Of course, this organismic wholeness cannot be identified and effectively evaluated until it is known just what the person displaying the behavior is trying to accomplish and the methods he is proposing to use in its accomplishment. There are all kinds of organismic wholes, and it is only in terms of purpose that they can be identified and used as criteria for task selection. For example, if the activity is building a house, one of the wholes which would go into the construction of the house would be a door. Now obviously the door is made up of a number of wholes itself—panels and so on. It is easily seen that if the purpose is to construct a door then all of the smaller wholes which make up the door must be considered. However, since the larger purpose is the construction of a house, the door serves as a whole in its own right and there is no reason to break it down into smaller units. The same sorts of critical tasks make up the job of educational administration. One of the tasks of the administrator, for instance, will be to set up acceptable accounting procedures to provide for the security of the money and property that are in his custody. The accounting procedures, in turn, will consist of many minute items such as the different techniques for inventorying materials, the different ways of accounting for moneys, and acceptable auditing practices. But in listing the critical tasks of the administrator it is not necessary to go into all the details which function in the performance of a task. The first criterion to be used in selecting critical tasks, then, could be stated somewhat as follows: The item to be listed as a critical task must possess a sufficient organismic unity and quality to be readily identifiable as one of the important tasks which make up the job of educational administration.

Second, the critical task may be identified as a step in the accomplishment of some desired purpose and would be so recognized by a competent observer who witnessed the particular behavior.

Third, the critical task will need to be of such a nature that it will be possible to employ different methods in performing it. That is, the more critical task is usually the one having two or more alternatives as to the method of performance. For example, in certain budgetary procedures the techniques are quite well standardized and allow little if any choice in their employment. However, in the planning of the budget the administrator must choose whether to involve the people in his community in the preparation of the budget or to consider it his own private prerogative. It is immediately recognized that this is a critical choice and belongs in the realm of critical tasks. Thus the task appears to become more crucial as it lends itself to a choice in methods of performance; further, it moves into a higher order of criticalness if this choice involves some of the larger social values previously explained in the section on theory.

Fourth and last, the critical task will have significant *relationships* with all the other elements of the ongoing task of educational administration. Somewhat as in a sociogram, where it is discovered which person is developing the most and the best relationships with his fellow beings, so also with the competency pattern it is necessary to include all of those elements which have important relationships. A critical task would have a great many important relationships growing out of and connecting with it. A task might require a great deal of theory, a fine degree of skill, and considerable know-how and still be noncritical because it was an isolated task which did not show any important relationships with all the other tasks of this job. On the other hand, a rather simple task could be most critical, not because of its size or the amount of know-how or theory included in it, but because of its great number of fine and important relationships with all the other tasks in the administrator's job.

Critical tasks will be more clearly understood if they are stated in terms of doing. Indicating what the administrator does and how he does it will help to portray the administrator in action in the various operational areas of his job. Further, stating critical tasks in terms of their methods of performance will in itself draw a relationship between the task and the theory. That is, the theory of the administration will find itself expressed in how the administrator goes about performing his tasks. The theory of educational administration does not necessarily imply all of the things the administrator needs to do in fulfilling his job; they are to be found in the nature of the job itself. However, without a doubt the choices of methods of job performance are influenced by the theory of educational administration.

AREAS OF CRITICAL TASKS OF EDUCATIONAL ADMINISTRATION

For purposes of stating critical tasks the job of educational administration may be divided into seven operational areas: organization and structure, finance and business management, student personnel, curriculum and instruction, staff personnel, school plant, and transportation. These subdivisions are made through the application of a single criterion: Do a large number of administrative tasks focus in the proposed area? Now it is obvious that the above seven areas do not represent the only organized categories of critical tasks of educational administration. Almost anyone can think of other areas which might be used, and more astute minds can probably think of more appropriate areas. But these seven areas will serve very well as focal points around which we may organize the tasks of educational administration. At the same time, the tasks falling within these areas have certain problems in common and lend themselves to related kinds of problem-solving activities. It will be the business of this chapter to list some of the critical tasks in each of the seven operational areas, stating them in such a way as to imply the methods of performance which will be consistent with the theory as previously presented. Naturally each of these critical tasks may not be appropriate for every job of educational administration. They are given here as representative of the kinds of critical tasks which will be encountered, and which satisfy the criteria developed above, and in no way are intended to be construed as the only critical tasks an administrator will ever encounter.

I. Curriculum and Instruction

A. In formulating curriculum objectives, the administrator
   1. Stimulates, in himself, the staff, and the school patrons, the development of understandings of the culture in which the school is located as well as its broader national and world setting.

2. Promotes clearer understanding of child growth and development and of the nature of the learning process.
3. Collects and makes available to instructional staff and others needed materials and information.
4. Makes certain that time and organizational machinery and means are provided to do the job.
5. Summarizes and coördinates progress in the clarification of objectives and disseminates information to all concerned.
6. Encourages school workers to keep objectives continuously in mind and to evaluate the school program in relation to them.

B. In determining content and organization, the administrator
1. Organizes the administrative and teaching staff, together with interested laymen and experts, for a coöperative attack on
    a. Clarification of objectives relating to behavior of pupils.
    b. Formulation of learning experiences and patterns which will induce desirable behavior in line with objectives (activities, units of work, courses of study, etc.).
    c. Determination of best curriculum design and organization to accommodate items in b—separate elementary and secondary programs, broad fields, grades 1 through 12, activity programs, core curricula, small vs. large blocks of time, selection of areas and courses within areas.
    d. Establishment of appropriate procedures for evaluating progress toward objectives and for making changes in curriculum content and organization.
2. Encourages continuous experimentation and curriculum improvement and coördinates achievements by publicizing and helping to keep attention focused on immediate goals and on the implementation of agreements reached.
3. Encourages consideration of the educational needs of all groups and provides in the program for special needs such as those of adults and part-time youth.

C. In stimulating the improvement of teaching (methods), the administrator
1. Attempts to develop in teachers clearer understandings of more effective practices for attaining objectives.
2. Encourages designed experimentation in teaching methods.

3. Encourages teachers to focus attention on the individual learner—to consider the conditions favorable to good learning, conditions which hamper learning, variations in capacity and goals among learners, the integral nature of human development, the psychological continuity in individual development, and the necessity for individual purpose in effective learning.
4. Establishes and maintains an atmosphere conducive to individual growth and productive group problem solving.
5. Fosters teacher-pupil and teacher-pupil-parent planning.
6. Keeps informed about new teaching aids; sees that they are available and that teachers are trained to use them effectively.

D. In providing instructional materials and resources, the administrator
   1. Sets up machinery for the coöperative selection of materials and for their storage, allocation, distribution, and perpetual inventory.
   2. Encourages maximum use of materials and resources indigenous to environment.
   3. Makes sure that uses of materials are adequately evaluated.

E. In evaluating the results of teaching, the administrator
   1. Sets up machinery for the coöperative (teacher, pupil, parent) and continuous evaluation of all the curriculum objectives.
   2. Uses *all* appropriate evaluative techniques and all sources of evidence that will shed light on attainment of objectives.
   3. Leads those concerned to the realization that objectives are not actually attained except in action and behavior.
   4. Uses evaluative results to better understand learner's capacities, to determine program or teaching weaknesses to be strengthened, and to serve as a basis for recording and reporting progress and for more effective guidance.
   5. Uses evaluative results to further coöperative planning by the school and community in improving program.

III. STAFF PERSONNEL

A. In determining personnel policies, the administrator
    1. Uses the resources of the staff and the community through an appropriate organization.
    2. Refers appropriate problems to the organization for study and recommendation of policy (selection, allocation, dismissal, salary, sick leave, tenure, staff organization, staff evaluation, etc.).
    3. Provides appropriate times and places for individual and committee work.
    4. Provides services, materials, and information needed (clerical, secretarial, research findings, etc.).
    5. Provides for the adoption and implementation of the recommendations.
    6. Provides for a continuous study, evaluation, and revision of the accepted policies (in terms of their operational values).

B. In securing of staff personnel, the administrator
    1. Aids and assists in the recruitment of prospective staff personnel.
    2. Provides for the determination of the job requirements.
    3. Determines with appropriate assistance the number and qualifications of people needed.
    4. Locates and maintains records of potential employees.
    5. Selects, recommends for employment, and contracts with appropriate personnel in keeping with approved policies and procedures.

C. In providing for personnel welfare, the administrator
    1. Assists in the adjustment of the personnel to the job, to associates, to the community, etc.
    2. Seeks the continuous improvement of policies and practices at all levels (salary schedules, provisions for sick leave, etc.).
    3. Seeks the development of a climate which encourages faith, confidence, and sympathy for mutually solving personal and professional problems.
    4. Promotes the improvement of personnel welfare (before the board of education, the community, the legislature, etc.).

   5. Makes provision for and encourages wholesome social activities.
   6. Provides counseling and guidance on personnel and professional problems.
   7. Encourages the method of consensus among operating groups as a way of preventing unwholesome differences.
   8. Provides the ways and means of working with the great variety of teaching and nonteaching personnel and professional organizations within the system (educational associations, unions, etc.).

D. In stimulating and providing opportunity for professional growth, the administrator

   1. Seeks the development of a climate conducive to desirable working relationships.
   2. Encourages counseling with associates, specialists, and others; plans inter-visitations, exchange of personnel, advanced study, and educational trips.
   3. Provides for and encourages freedom to use new ideas and new techniques within the accepted philosophy and objectives.
   4. Considers the plan for program improvement a primary means of professional growth.
   5. Encourages professional reading, workshop participation, active membership in professional organizations, etc.
   6. Encourages and provides opportunities for self-evaluation.

E. In building and maintaining high staff morale, the administrator

   1. Creates a feeling on the part of each person that he is a member of a whole team, and that what he does is a contributing factor to the success of the program.
   2. Fosters mutual confidence and wholesome relationships among all staff members.
   3. Provides a desirable working environment and essential instructional materials and equipment.
   4. Provides for the development of the maximum leadership of each staff member.

5. Encourages recognition and commendation of worth-while accomplishments.
6. Seeks to expedite administrative decisions within the framework of approved policies and accepted organizational procedures.
7. Encourages a free flow of criticisms on administrative decisions, which are transferred immediately to policy-making groups.

F. In seeking the maximum utilization of staff personnel, the administrator

1. Provides an organization whereby staff members, community representatives, and state and regional specialists may coöperatively participate in the identification of significant educational problems.
2. Utilizes the special abilities within the staff, within the community, and within the state and region on identified problems.
3. Provides for the integration and coördination of efforts of personnel.
4. Provides the time, materials, and related services necessary to facilitate the work.
5. Facilitates the dissemination of recommendations for further study, revision, and acceptance by the entire staff and the community.
6. Provides for the implementation of the accepted recommendations.
7. Provides for the maximum utilization of staff personnel in appropriate ongoing evaluation and revision activities.
8. Provides for the clarification of duties and relationships among personnel.
9. Delegates authority commensurate with responsibilities.
10. Provides appropriate space, materials, supplies, and services for the fulfillment of responsibilities.

IV. SCHOOL PLANT

A. In formulating objectives, the administrator

1. Creates a favorable climate to enable pupils, educational staff,

school board members, parents, and other citizens to study conditions relating to the school plant.

2. Assists community groups to recognize the need for safe, pleasant, functional, and efficient school plants to serve as home and operational center for the community program of education.
3. Uses studies, information, materials, and the resources of agencies to assist community groups to understand the implications of the school plant.
4. Develops policies to be recommended to the board of education concerning the scope of the educational plant and its use through coöperative participation of community groups.
5. Assists in the preparation of educational specifications in terms of the educational programs.
6. Arranges opportunities for the staff and community to appraise school plants in relation to the total educational program.

B. In the planning and construction of new school plant facilities, the administrator

1. Recommends to the board of education the employment of a competent school architectural staff.
2. Presents to the selected architect the educational specifications which form the basis for the physical facilities.
3. Evaluates the preliminary plans of the architect with educational staff, board members, and community representatives.
4. Presents and recommends for adoption completed plans and specifications which have been approved by the necessary governmental agencies.
5. Presents to the board of education final plans for financing new facilities.
6. Recommends to the board of education contracts to be awarded in accordance with accepted bid practices.
7. Oversees actual construction, approving payments and minor changes in plans with the consent of the architect.

8. Approves the completed facilities in coöperation with the educational staff, board of education, and community groups.
9. Procures furniture and equipment with the assistance of the educational staff, board of education, and community groups.
10. Helps staff and community understand that the purpose of the school plant is to serve the educational program.

C. In the operation and maintenance of the school plant facilities, the administrator

1. Recommends to the board of education, with the assistance of the educational staff, the employment of approved personnel and provides for their continuous training.
2. Arranges for the functioning of maintenance schedules for individual buildings and system-wide services.
3. Provides for the procurement, storage, distribution, use, and evaluation of materials and supplies.
4. Makes provision for periodic appraisal of maintenance programs with modification and improvement as indicated.
5. Assists in relating maintenance to the daily work of pupils and educational staff, and helps make maintenance personnel an integral part of the educational program.

V. ORGANIZATIONAL STRUCTURE

A. In developing a satisfactory staff organization, the administrator

1. Determines coöperatively the number of staff members the system requires and the number the resources of the system will permit.
2. Makes an analysis of the program of the system, listing the jobs to be performed and indicating the logical combinations, where necessary.
3. Selects suitable candidates for the positions indicated and makes appropriate recommendations to the governing body for their employment.
4. Makes necessary allocation of duties and responsibilities among the members of the staff through a series of conferences.

VI. FINANCE AND BUSINESS ORGANIZATION

A. In formulating objectives, the administrator
   1. Assists the people in the community in determining the program of education.
   2. Helps the members of the community to determine the available and potential resources which may be secured to support the educational program.
   3. Uses studies, information, material, and resources of various agencies in developing a plan of growth for the educational program.
   4. Evaluates the financial program with members of the community in order to insure educational opportunities for every individual in the system.

B. In facilitating the flow of funds into the educational program, the administrator
   1. Translates the educational program into a financial budget with the assistance of the educational staff and community groups.
   2. Recommends the financial budget to the local board of education and other governmental agencies as required by law.
   3. Makes the necessary applications for the delivery of funds to the district treasury from the various governmental agencies.
   4. Makes provision for the safeguarding of funds of the district and their payment according to law.

C. In disbursing the funds of the district, the administrator
   1. Arranges for the purchase of services and materials in accordance with the financial budget and with authorization of the board of education.
   2. Maintains adequate financial records and makes periodic reports to the necessary governmental agencies.

D. In accounting for the funds expended in the operation of the educational program, the administrator
   1. Arranges for the formal annual audit of accounts and other necessary audits.

2. Makes public reports of financial expenditures to governmental agencies and people.
3. Assists people of the community to appraise the effectiveness of public-school expenditures in terms of the educational program and opportunities.

VII. TRANSPORTATION

A. In formulating objectives, the administrator
   1. Creates a favorable climate to enable pupils, teachers, school board members, parents, and other citizens to study conditions relating to school transportation.
   2. Assists community groups to recognize the need for safe, convenient, comfortable, and efficient transportation in getting children to and from school, in extending learning opportunities through community visits and trips, and in providing appropriate service to the community program of education.
   3. Uses studies, information, materials, and other agencies to assist community groups to understand the implications of transportation.
   4. Develops policies to be recommended to the board of education through coöperative participation of community groups.

B. In the operation of the transportation system, the administrator
   1. Facilitates the procurement of equipment and supplies through approved methods of purchase and contract.
   2. Organizes and provides an efficient system of maintenance to enable the transportation system to operate safely and with dispatch.
   3. Arranges for the selection, training, and supervision of personnel who perform the many and varied functions of the transportation system in operation.
   4. Develops effective working relations with road department and other governmental agencies.
   5. Provides opportunities for the educational staff and members of the community to appraise transportation services in terms of objectives and the educational opportunities.

These statements carry a strong emphasis upon the manner in which the critical tasks are to be performed in the job of educational administration. There is an undergirding direction, provided by the theory segment of the Competency Pattern and its basic assumptions regarding the ideals of American democracy, the primary functions of American public education, and the role of educational administration.

CHAPTER 12

Know-How of the Educational Administrator

During these discussions of the elements of competence—the theory, the job task, and the know-how—it is well to keep constantly in mind that they are elements and that they have been isolated from the context of competent behavior for purpose of examination and analysis. At no time is it to be assumed that competence is purely a matter of know-how, or for that matter of theory, or of the job. As was discussed more fully in Chapter 3, competence does not result until all of these elements are present and are interacting so as to form relationships appropriate for the task at hand. This word of caution is included because it is very easy to forget that there are other elements and relationships and to concentrate upon know-how items exclusively. This may be due to some extent to the kind of training programs that have existed in the past, and to the widely accepted notion that a man will do a good job if he has only accumulated the needed knowledges required by that job.

At this point we may clear up another possible source of difficulty and misunderstanding. This has to do with the inclusion of the elements of theory in the know-how category. Theory has so many definitions and so many connotations that it is well to clarify its meaning. As used here *theory* refers to the basic beliefs which a person accepts as the guides for his way of living. It includes what we mean when we talk about the democratic theory of social living, the worth and dignity of all individuals, our concepts of the nature of truth, etc. Since these kinds of theories are basic to all human operations, in the Competency Pattern they are given a considerable emphasis; in fact, the theory forms the foundation for the whole pattern. It sets up all along the way the signposts which are to be used in considering acceptable kinds of know-how, methods to be used in dealing with the various tasks, ways in which people can work with people, and similar matters. Thus, when the word *theory* is used it connotes only those important theories which really make a great deal of difference as to the kind of life a person deems worthy of effort.

However, our culture has another general use for the word *theory;* it is often erroneously used to mean "hypothesis." Some engineers in Detroit have a "theory" that the hemispherical combustion chamber is "better" than any of the other types. It is immediately seen that such use of the term is not proper (at least according to the previously presented definition), because the "theory" with regard to the efficiency of the hemispherical combustion chamber is really nothing more or less than a working hypothesis. It will only serve to direct the action long enough for it to be tested. The results will either prove or disprove it, when it will either become a fact or be discarded as untrue.

This explanation of theory has been presented in order to clarify the false notion that theory is really a part of know-how. The kinds of "theories" which are really working hypotheses are indeed a part of know-how. And it is a very important function of know-how to be able to formulate such hypotheses and test them. However, the basic theories are in the nature of assumptions and as such really guide the activities and purposes which make up the methods used in performing the tasks. They are not under an immediate investigation or search for truth but are the foundation upon which the other activities are erected.

A CONCEPT OF KNOW-HOW

One of the assumptions of this book is that educational administration is a specialized kind of activity. That is, as was shown in the discussion regarding the community, the educational administrator is charged with certain special tasks relative to the functioning of that part of the community's institutions which comes under the heading of organized education. Acting under the authority of the purposes ascribed to the school he carries out certain responsibilities which no other individual in the community will need to perform.

However, the administrator is also a participating citizen in the general affairs of the community. There are certain similar tasks which all community members will need to perform. For example, all are charged with responsibilities regarding the ongoing civic affairs of the community. Each person is responsible for planning for the growth of his community, for establishing and improving the rules and mutual understandings which regulate the activities of the community, for setting up educational aims and objectives, business objectives, and so on. Thus each individual has two kinds of tasks to perform. First there are those tasks, just listed, which include all the common areas of group participation bearing on the general welfare of the community. Second, each person usually acts also in a specialized area. The watchmaker has specialized tasks in keeping all of the timepieces operating, the schoolteacher has specialized tasks relative to teaching the children and adults of the community, the doctor has tasks pertaining to his job of maintaining the health of the community. Each one carries out general tasks and specialized tasks. The specialized tasks seem to fall largely in those areas considered vocational. That is, a person's area of specialization is very frequently his area of vocational occupation. While it is not our purpose to discuss whether or not such is a good arrangement, the question might be brought up as to whether a person should not receive a monetary compensation for being competent also in all of the common or generalized tasks of his community.

To continue with the observation that a person is usually engaged in two kinds of tasks, those in his area of specialization and those which fall within the general area: It is logical to assume that this person will need to possess two kinds of know-how. This, of course, does not mean that there are two separate and distinct kinds of facts, knowledges, and so forth, but that there will be certain know-how elements appropriate for everyone living within the community and certain specialized concentrations of know-how which will accrue to various individuals because of their activities in specialized areas. For example, each person should be able to participate in deciding whether or not reading should be taught in the schools, but it is not necessary for each person to be able to perform all the activities appropriate to the teaching of reading. This rather technical kind of know-how is needed only by the teacher who is employed to carry out the teaching job. The know-how which is essential to the tasks of all members of the society, and which thus should be possessed by everyone, may be termed the basic know-how of the individual. This will include such things as skill in using appropriate tools of communication (speaking, reading, writing, drawing, and other communication devices) and a general understanding of the culture within which the individual lives, how it came into being, and the attitudes or social theory underlying it. Since this concept of basic (general) know-how is obviously fundamental to a program of general education, the educational administrator, through his attendance upon a program of general education, will receive a large percentage of it in his training.

A program of professional, vocational, or technical education will be based upon those tasks required by a specialized job, and these specialized activities will call for special know-how. Thus it is assumed that there is a body of know-how common to the general requirements of educational administration and that its major aspects may be successfully identified and included in the training program. In addition, of course, each educational administration job will have some unique characteristics which may require know-how items not common to the field in general. As an analogy it may be noted that in attending his patients the physician never finds two cases which are exactly alike. Further, he finds few, if any, which fit exactly the idealized cases he studied in medical school. However, no one would go so far as to say that the study of medicine is not an organized discipline. In like manner the study of educational administration will be identified as an organized discipline. It will find its logical subject matter in the know-how which is appropriate to the tasks required to achieve the objectives of educational administration.

CRITERIA FOR SELECTING THE KNOW-HOW

Know-how has been defined as the personal equipment which the individual brings to the job. It includes knowledges, skills, attitudes, understandings, and any other abilities which may be developed through experience. In order to select the know-how appropriate to the job of educational administration we need some criteria to serve as guides.

One of the important features of the competency pattern is that it tends to increase consistency in behavior. It is immediately recognized that not all items of know-how will be appropriate to the educational administrator. For the competency pattern to be consistent the know-how will have to be consistent, or at least not in serious conflict, with the tasks to be performed, and with the basic theory. To use a rather overdrawn illustration, it may at some time be one of the job tasks of the administrator to raise additional funds for desirable educational activities. The know-how needed to do this task should be part of the preparation program. However, the administrator will not receive training in how to be a successful counterfeiter and print the desired funds, nor in how to crack a safe or rob a bank. Obviously these antisocial activities are in conflict with the basic theory of the Competency Pattern.

At the same time it is not so easily realized that serious conflicts do exist in each person's pattern of behavior. For example, the mistaken understanding that children are born moral and society must not corrupt them led to the "progressive" school, wherein the child was allowed to do just as he pleased without any effective guidance. This single mistake brought many modern programs of education into disrepute. Our first criterion, therefore, will be consistency within the behavior pattern.

Second, the selected item of know-how must relate meaningfully to the competence requirements in one or more of the job tasks. There are many items of know-how which will fulfill the first criterion by not being in serious conflict with the basic theory of the pattern. However, such simple agreement is not enough; each item must really assist in carrying out the tasks and in solving the problems which arise within the tasks. Thus the second criterion states that the item of know-how must be directly related to the performance of one or more of the tasks of educational administration.

In earlier discussions revolving around the job tasks it was shown that some tasks are of more importance to the major objectives of educational administration than others. This led to the notion of critical tasks and to the observation that the tasks appropriate to the competency pattern of educational administration should be those of greater importance.

In a somewhat similar manner the know-how of educational administration will show degrees of criticalness. That is, some know-how items will be almost indispensable, others will be significant but to a lesser degree, and still others will be in the category of nice-to-have or needed-but-rarely. Just as it was assumed that a person would be competent to a sufficient degree if he performed all the critical tasks, and that in every likelihood the noncritical tasks would be taken care of with no difficulty, so it is assumed that within the competency pattern concentration should be on the important know-how of the educational administrator. The minutiae and the nice-to-know will be either automatically taken care of or, even if completely omitted, only slightly detrimental to the efficiency of the program. Neither will they affect in any drastic way the total validity and usefulness of the competency pattern of the educational administrator. As a third criterion it may be noted, therefore, that the selected know-how items must be *significant* to the performance of the job of educational administration. Further, they must be a frequently used part of the personal equipment of the administrator—items which really function in helping him do an acceptable job.

Thus we have three criteria useful in the selection of know-how for the educational administrator:

1. The item of know-how is compatible with the other elements within the pattern.
2. The item relates meaningfully to the job tasks.
3. The item is significant to job performance and is frequently used in the planning and execution of the tasks of educational administration.

THE KNOW-HOW OF EDUCATIONAL ADMINISTRATION

The sum total of know-how of educational administration, both in its basic and in its specialized aspects, reaches a magnitude of considerable proportions. For this reason it is again appropriate to devise some categories for the various kinds of items, as was previously done when dealing with the job tasks of educational administration (Chapter 11). It will be recalled that the critical tasks of educational administration are divided into seven operational areas: (1) organization and structure, (2) finance and business management, (3) student personnel, (4) curriculum and instruction, (5) staff personnel, (6) school plant, and (7) transportation. At first glance it might appear that these critical task categories would also serve well as categories for know-how items. However, a little experimentation reveals that they are not very adequate because of the large amount of repetition that will take place. For example, in each area the administrator will have to exercise skill in working with groups of people to solve some particular problem. So the item of know-how which refers to skill in working with groups would need to be listed in all seven areas. And such would be the case with many other items. They appear over and over in many and various task situations. It will be more profitable to arrange new categories which will not include so much repetition.

This new point of view shows that tasks revolving around similar kinds of know-how may well be placed together. Thus there are

1. Groups of tasks involving coöperative endeavor in the design, execution, and improvement of the total program of education.
2. Groups of tasks involving curriculum design.
3. Groups of tasks involving the providing of a permissive learning and working atmosphere—materials, space, time allotments, and like items.
4. Groups of tasks involving the actual improvement of instruction—demonstrations, discussions, use of teaching aids, and selection of learning experiences.
5. Groups of tasks involving promotion and stimulation—public and professional understandings, student interest, and the like.
6. Groups of tasks involving student guidance—student objectives, learning difficulties, and others.
7. Groups of tasks involving routine administrative duties—record keeping, inventories, grades, purchasing, and so on.
8. Groups of tasks involving evaluation activities—program effectiveness, total effectiveness of the learning experiences, and the assessment of student progress.

Obviously these categories overlap somewhat, and there are probably some omissions. Nevertheless, they will contain the know-how appropriate to the tasks described in Chapter 11. Further, they will make it easier to assess the know-how elements in terms of their consistency and effectiveness relative to other elements in the pattern.

It has been said that know-how items—personal equipment of the administrator—are made up of (1) attitudes, (2) skills, (3) knowledges, and (4) understandings. When these subcategories are included under each of the eight major task classifications a convenient form is established for organizing the know-how of educational administration.

The following listings are not intended to stand alone. Their true meaning may not be revealed except when viewed in proper contextual relationships, i.e., as an integral part of the total competency pattern. For example, "To conduct a group discussion in a democratic manner" has only a vague meaning until it is brought into focus by the other pattern segments of theory and operational tasks and purposeful relationships are established.

In doing those tasks involving coöperative endeavor in the design and improvement of the total program of education the following know-how is of major importance.

A. Skill

1. In getting people to work together harmoniously as a functioning and purposeful group.
2. In working as a member of a group to promote free discussion and the formation of consensus opinions.
3. In aiding the group in the process of problem and need identification.
4. In stimulating group thinking.
5. In fact finding and research activities appropriate to the problem to be solved.
6. In leading group discussions without dominating the thinking and forcing the conclusions.
7. In recognizing abilities in others—contributions they can make toward group effectiveness.
8. In aiding members of the group to formulate purposes and assume responsibility.
9. In identifying and defining school functions in the context of the totality of community functions.

10. In group dynamics—control and use of the forces operating upon and within a group situation.
11. In devising learning experiences designed to achieve the desired objectives and purposes.
12. In communicating, examining, and evaluating ideas.
13. Other items appropriate to the task.

B. Attitudes
   1. A belief in the efficacy of the group process in the solving of common problems.
   2. A respect for the dignity, integrity, and inherent worth of others.
   3. A belief that, when informed, people will choose and support a good program of public education.
   4. A feeling that each person has a valuable contribution to make toward the success of the educational program.
   5. A belief that the public-school system is a democratic coöperative enterprise.
   6. A desire to be governed by facts even when they challenge a belief.
   7. A belief that democratic education liberates and uses the intelligence of all its members.
   8. All other items appropriate to the task.

C. Knowledge
   1. Of "group dynamics."
   2. Of other school programs (local, state, national).
   3. Of research and fact-finding procedures and community study techniques.
   4. Of the service functions and social forces which cause the community to exist.
   5. Of human growth and development (physical and psychological).
   6. Of the human needs which may be logically assigned as a responsibility of the public school.
   7. Of the emotional and psychological factors operating upon the members of a coöperative group endeavor.
   8. Of the theories and value systems basal to democratic action.
   9. Other items appropriate to the task.

D. Understanding

1. That the school is only one of the many social institutions, and its function is to improve the quality of human behavior.
2. That in a democratic society the public school functions for the benefit of all.
3. That people have the right to say what their public-school program shall be.
4. That school program improvement is best achieved through coöperative evolutionary means.
5. That, in terms of a common problem, plans are more effectively made as a group endeavor; execution is usually a matter of individual responsibility.
6. That human behavior is usually controlled by emotions as well as by thinking.
7. That democratic education guarantees to all the members of its community the right of sharing in the determination of the aims of the educational program.
8. That the right of sharing in the planning entails a responsibility in the execution of the plans.
9. That the school must, logically, reflect the society and culture within which it exists.
10. That for a society to be strong, there must be a common core of social values to which all, or nearly all, subscribe.
11. That in our specialized industrial culture the force of certain unorganized educational factors—farm life, helping parents provide the family subsistence, and the like—has declined, and this fact has placed an added responsibility upon the schools.
12. That "transmitting the cultural heritage," as an educational aim, means aiding the learners to understand the contemporary culture.
13. That organizational schemes are devised to facilitate and give freedom of action to the learning process.
14. Other items appropriate to the task.

In doing those tasks involving curriculum design and development the following know-how is of major importance.

A. Skill

1. In stimulating and helping those concerned to establish and clarify the school's aims and purposes.
2. In getting and using expert opinion in those curriculum phases which require professional advice.
3. In describing to others his ideas regarding learning experiences or things-to-be-done to achieve the school's purposes.
4. In relating the contributions of various organized areas of learning to the needs of the total program of education.
5. In recognizing developmental levels in those learners pursuing the curriculum.
6. In devising and in assisting others to devise learning experiences appropriate to the interests and developmental levels of those learners.
7. In defining and in assisting others to define the behavior changes to be achieved through the learning experiences, and in indicating how these behavior changes relate to the aims and objectives of the school.
8. In incorporating the use of available community resources into the curriculum plan.
9. In making the curriculum appropriately reflect learner purposes and interests.
10. In evaluating the curriculum in terms of defensible modern psychological and philosophical principles and values.
11. In incorporating the necessary curriculum flexibility required by individual differences and unique teaching and learning situations.
12. Other items appropriate to the task.

B. Attitudes

1. A belief that the curriculum represents an evolving plan for achieving the purposes of the program of public education.
2. A feeling that the project method of learning—problem solving—is the most effective methodology available for training the kind of citizens needed in our culture.
3. A belief that the curriculum must reflect student as well as teacher purposes.

4. An intent to participate in developing a curriculum which will serve the real needs of the learners.
5. A belief that the school is a social instrument, and the primary aims of education are essentially social aims.
6. A belief that the "cultural heritage" is essentially a resource tool to be used in further inquiry and problem-solving activities.
7. A belief that children can best learn the culture in which they live by appropriate study of the problems of that culture.
8. A belief that the "common man" can do effective thinking and, when informed, can make intelligent decisions.
9. Other items appropriate to the task.

C. Knowledge

1. Of the roles of the various institutions functioning in a modern culture; the problems they help solve and the problems they create.
2. Of the big concepts and ideas from the various disciplines of organized knowledge—of the nature of things from the physical sciences, of social concepts from the social studies, and of beauty and aesthetics from the arts.
3. Of the nature of human needs.
4. Of the nature of the learning process.
5. Of the position of educational administration and how it can contribute to the total program of general education.
6. Of various survey techniques and study methods which may be used to evaluate the effectiveness of a curriculum.
7. Of the nature of the major problems confronting the existing social order.
8. Of various schemes which have been advanced for the purpose of developing and organizing a curriculum.
9. Of the various schools of thought regarding the fundamental assumptions underlying the formation of a curriculum.
10. Of the amount and kind of student indoctrination permissible (within his system of values) in a curriculum.
11. Of the kind and amount of teacher skills required by a specified curriculum.
12. Of the physical plant, equipment, materials, and services required by various plans of teaching.

13. Other items appropriate to the task.

D. Understanding

1. That education is a "reconstruction of experience."
2. That the industrial nature of the American culture is unique and without precedent in the world's history.
3. That modern psychological principles tend to support the problem-solving way of learning.
4. That all the large areas of organized knowledge contain ideas and understandings important to the general education of all.
5. That memorizing the results of the thinking of others is not a very good way to learn skill in thinking.
6. That there are many activities appropriate to achieving the aims of education. There is no need to limit the curriculum to a few prescribed learning experiences.
7. That learners are eager to become active participating members of their society. They grow and develop whenever the learning experience is appropriate for their level of development, and when they see the relationship between the learning and their purposes.
8. That subject matter and organized knowledge are important, but the use to which they are put, the methods employed in their use, and the values of the use are more important.
9. That no person can learn more than a small part of the accumulated knowledge of the world; that, however, every normal person can learn and understand the important behaviorial values of his society.
10. That education for intelligent followship is no different from education for intelligent leadership; both require skill in critical thinking, careful planning, and effective execution.
11. That modern industrial production techniques have made it possible for everyone to have a decent standard of living (material things). The peoples of the world are beginning to understand this fact and are no longer willing to starve through this life with little hope other than the promise of a better life in another world. Herein lies a major problem of modern national and world society.

12. That behavior changes in learners constitute the only valid criterion for evaluating the effectiveness of a curriculum.
13. Other items appropriate to the task.

In doing those tasks involving the providing of a permissive learning and working atmosphere the following know-how is of major importance.

A. Skill
  1. In using available space for maximum educational efficiency, or, if planning for new building, in planning to house the proposed program of education.
  2. In selecting equipment appropriate to the planned activities and consonant with the aims and purposes of the educational program.
  3. In arranging materials and equipment so as to provide maximum utility, safety, and flexibility.
  4. In providing for the repair, upkeep, and general maintenance of the educational facilities.
  5. In providing the necessary flexibility demanded by a program that aims to teach creative and problem-solving skills.
  6. In selecting materials appropriate to the learning needs and activities, and within assigned budgetary limits.
  7. In demonstrating that student freedom is contingent upon student responsibility.
  8. In providing an attractive area dedicated to planning activities, and furnishing the area with appropriate books, magazines, plans, reference materials, and furniture.
  9. In interpreting the school program and needs to others.
  10. Other items appropriate to the task.

B. Attitudes
  1. A belief that the school facility is primarily a tool to promote learning.
  2. A belief that organizational flexibility is necessary to insure learning and give freedom for constructive activity.
  3. A belief that rules are coöperatively made so as to take care of details, and students are thus free to get on with the important business of learning.

4. A feeling that skill in problem solving is one of the more important products gained from a student "project."
5. A concern regarding the safety and health of the student personnel.
6. A feeling that the school program must be so ordered as to provide for individual instruction, individual rates of learning, and varying levels of student development.
7. A concern for the emotional well-being and success attitudes of the learners.
8. A desire to provide a sufficient variety of learning activities so that each student may find at least one in which he is interested and can perform with a creditable measure of success.
9. Other items appropriate to the task.

C. Knowledge

1. Of the kinds of functions the school can best serve relative to the task of furthering the aims of education.
2. Of the appropriate tools, materials, and space needed for the various functions of public education.
3. Of physical plant layouts and arrangements relative to the educational purposes to be served.
4. Of the proper care and maintenance requirements for the physical plant, equipment, and supplies.
5. Of expeditious and reliable procedures for the storage and issue of instructional materials.
6. Of safety hazards, and the conditions necessary for safe and healthful industrial surroundings.
7. Of the various types of physical facilities needed by, and peculiar to, the several organized areas of learning.
8. Of the various schemes for student personnel organizations.
9. Of the scope of activities possible in the school so as to permit as wide a variety of experiences as possible, but without letting students get into impossible problem situations (impossible in terms of available materials, tools, time, and/or student ability).

D. Understanding

1. That, when correctly conceived, the school is initially a problem-solving laboratory.

2. That the school, both in physical make-up and in learning activities, should reflect the needs and purposes of its community.
3. That a laboratory with many available tools and many possible work procedures stimulates the process of mental trial and evaluation which is an important phase in skillful problem solving.
4. That students learn coöperative values when working together on common problems and coöperative projects.
5. That defensible student motivation must be in terms of interest, stimulation, guidance, mutual respect, and a permissive work atmosphere.
6. That learning is usually easier and more efficient when many of the organism's functions are involved, i.e., the senses, muscular responses, and emotions.
7. That there is danger of perversion of the purposes of the school—excessive interest in athletics, cafeteria, social events, and the like.
8. That quality equipment is essential because of the normal misuse caused by learner inexperience.
9. Other items appropriate to the task.

In doing those tasks involving the improvement of instruction the following know-how is of major importance.

A. Skill

1. In arousing interest and in stimulating the teacher to purposeful activity aimed at improvement.
2. In causing the teacher to recognize educational needs and the efforts necessary to overcome his deficiencies in skills, knowledges, understandings, and attitudes.
3. In getting every teacher to participate in the planning and work of the group.
4. In identifying the factors operating as obstructions to curriculum improvement.
5. In the organization of teacher personnel.
6. In the use of reference materials and the gathering of pertinent data.

7. In relating the learning experiences to the total context of the cultural environment.
8. In the use of the modern technical improvements in teaching aids and communication.
9. In using human and material resources and agencies within the school's community.
10. In evaluating results and progress in terms of accepted purposes.
11. Other items appropriate to the task.

B. Attitudes
   1. A belief in the individual value and growth potential of every member of the school.
   2. An appreciation of the unique individuality of each.
   3. A belief that people are flexible dynamic organisms capable of growth and development in a variety of directions.
   4. A conviction that educational programs must logically reflect the culture within which they exist.
   5. An appreciation of the big conceptual inventions—research, the scientific method of problem solving, and others.
   6. A concern for the aesthetic values to be sought in a program of general education.
   7. A feeling that non-learning and arrested growth are usually not the result of a lack of intelligence on the part of the individual but more frequently are caused by health and/or emotional problems.
   8. A desire to make the instructional program reflect the aims and objectives of the overall enterprise of community public education.
   9. A desire to help each member grow and develop to the fullest extent of his capabilities.
   10. Other items appropriate to the task.

C. Knowledge
   1. Of the psychological nature of the human learning process.
   2. Of the subject matter appropriate to the instructional area. (This factor will vary widely and is dependent upon the instructional level, scope and depth of the program, and educational purposes.)

3. Of the mental and physical growth and development of human beings.
4. Of valid needs and purposes motivating the learners.
5. Of the behavior changes called for by the accepted educational aims and purposes.
6. Of the important problem-solving tools—the scientific method, critical thinking, research, the interpretation of data, and the nature of proof.
7. Of the cultural values basic to the existing society.
8. Of the need for coöperation under the modern conditions of the mutual interdependence of individuals.
9. Of the hazards, physical and mental, inherent in a modern culture, and of appropriate safety measures.
10. Of the various techniques of teaching, use of teaching aids, testing and evaluation, etc.
11. Of the literature and philosophy of education in general and of educational administration in particular.
12. Other items appropriate to the task.

D. Understanding

1. That all learning is in terms of the learner's past experiences.
2. That individual learning is a process of getting meanings through the seeing of relationships.
3. That the seeing of relationships—understanding—is a higher form of learning than is the formation of stimulus-response habits.
4. That the human organism selects stimuli appropriate to its purposes, and therefore purposes are of prime importance to the success of an organized program of education.
5. That rote knowledge is useless without the methods, skills, and understandings necessary to put it to work in the solving of problems.
6. That, in the work of improving human living, aesthetic and social values are of at least equal rank with material goods.
7. That the constantly evolving cultural environment requires educational programs to be constantly revised and brought up to date.

8. That the learning of democratic values requires the use of democratic means and processes.
9. That programs of instruction should be planned and maintained with the advice and coöperation of the various groups concerned.
10. That public education is only a part of the community's total program of education and should be consonant with the aims of that total program.
11. Other items appropriate to the task.

In doing those tasks involving promotion and stimulation the following know-how is of major importance.

A. Skill
   1. In relating community needs and resources to the development of the program of public education.
   2. In working with community members to identify, define, and clarify the functions assigned to the educational program.
   3. In assisting the group to see and define those problems relating to educational programs in general.
   4. In interpreting the literature and philosophy of educational administration as related to the educational aims of the community.
   5. In the use of appropriate lay groups in the planning and advisory phases of the job.
   6. In stimulating the group to clarify its thinking and reach consensus.
   7. In working with teachers of other subject areas, and administrators, to the end that all recognize more clearly the unified nature of the educational effort and the role assigned to each person.
   8. In identifying the "power structure"—key and influential persons and groups—within the community and eliciting aid and program support from this source.
   9. In stimulating students to think constructively about their educational needs and purposes.
   10. Other items appropriate to the task.

B. Attitudes
   1. A belief that opinions, as such, are valid only when based upon facts and valid information.

2. A feeling that everyone needs, at times and in varying amounts, some personal stimulation and guidance.
3. A belief that people will support more vigorously an educational program that they have helped to plan.
4. A feeling that decisions made by informed groups are, in general, more accurate and generous than individual decisions.
5. A belief that the people of the community have the right to decide on the aims and objectives of their educational program.
6. A belief that the learners, in terms of their level of maturity, have the right to participate in planning their learning activities.
7. A belief that in a democracy local initiative and local coöperative action are highly desirable.
8. A belief that effective and widespread communication of information and ideas is essential to coöperative endeavor.
9. Other items appropriate to the task.

C. Knowledge

1. Of the philosophical and psychological foundations of public education.
2. Of the kind of atmosphere conducive to effective group action, and of the factors which may tend to nullify the efficiency of the group.
3. Of the costs of a program of education.
4. Of the various effective means and techniques of group, individual, and community communication.
5. Of the leadership structure of the community.
6. Of survey and analysis techniques and the interpretation of the resulting data.
7. Of student body leadership and the social structure of the student group.
8. Of pertinent legal requirements—restrictive, permissive, or otherwise.
9. Other items appropriate to the task.

D. Understanding

1. That democracy imposes upon everyone the obligation to become reliably informed.
2. That coöperation and shared intelligence and efforts are more productive than uncoördinated individual actions.

3. That to improve an educational program requires improvement in the people concerned with the program.
4. That the kind of program desired is a community decision; the technical phases of program execution are matters for expert skill and know-how.
5. That in a democratic society intellectual stimulation is the approved method of arousing interest and concern.
6. That mutual understanding and appreciation build good school-community relationships.
7. That community resources, human and material, need to be discovered and used to strengthen the school's program.
8. That "more intelligent living" is the "big" aim of public education.
9. That democracy aims to create situations wherein individuals are given the freedom, encouragement, and stimulation necessary for maximum growth and service.
10. That vested interest groups seldom willingly give up their special privileges.
11. Other items appropriate to the task.

In doing those tasks relating to guidance the following know-how is of major importance.

A. Skill
  1. In identifying those needs appropriate to the function of the school.
  2. In finding the causes of non-learning, and taking remedial action.
  3. In making available various tests appropriate to the student guidance function—intelligence, aptitude, vocational interest, and others.
  4. In intelligently applying the results of such tests, plus other information and evidence, to the individual guidance problem.
  5. In observing and interpreting behavior.
  6. In using valid ways and means of improving morale and success attitudes.
  7. In coöperating with teachers and school personnel in setting up an adequate guidance program.

8. In using dynamic learning experiences to improve student interest in school and in educational growth.
9. In using expert guidance counseling assistance whenever the need for it is indicated.
10. In establishing rapport with teachers and students through the building of a feeling of mutual confidence.
11. Other items appropriate to the task.

B. Attitudes

1. A respect for the unique potentialities of each teacher and each student and a belief in the student's right to grow and develop.
2. A belief that all persons need, at times and in various ways, to have some guidance.
3. A belief that the school has the right to "fail" a student in those courses showing unsatisfactory progress, but that such a right implies the responsibility for redirecting the student into channels of endeavor more suited to his interests and capabilities.
4. A feeling that guidance aims to cause the learner to evaluate himself and make intelligent decisions based upon the findings.
5. A belief that guidance is most effective when the adviser and advisee operate within an atmosphere of mutual respect and confidence.
6. A belief that guidance is a continuous function related closely to all phases and levels of the educational program.
7. Other items appropriate to the task.

C. Knowledge

1. Of the psychological and physiological growth and development of human beings.
2. Of the needs and problems which concern, or should concern, those responsible for the schools.
3. Of various behavior patterns and what they mean in terms of individual adjustment or maladjustment.
4. Of the various test instruments appropriate for gathering pertinent guidance information.
5. Of the use of other ways and means of gathering additional guidance information—observation, records, interviews, and the like.

D. Understanding

1. That stimulating a person to do constructive thinking about his problem is frequently a primary factor in the guidance task.
2. That self-discipline and self-direction are goals of democratic education.
3. That guidance services are designed to assist individuals in making their own decisions after a careful analysis of their own situations.
4. That successful guidance activities are improving the individual's ability to make sound adjustments, choose wisely, and formulate both immediate and long-range plans.
5. That the more successful guidance programs seek the assistance of all who can aid the person in making satisfactory decisions—teachers, parents, physicians, experts, and others.
6. That no single instrument will provide completely valid guidance information, and the student needs much evidence from tests, records, and observations before he can make an intelligent decision.
7. That the ability for intelligent self-direction is a learned ability, and each person can improve his skill in this important area of living.
8. That, to be effective, students must make decisions which they accept emotionally as well as intellectually.
9. That common problems may be effectively dealt with through the use of organized group activities.
10. That as a school function the guidance program is a responsibility of the total school staff.
11. That guidance activities should reveal information relating to curriculum evaluation and program improvement.
12. Other items appropriate to the task.

In doing those tasks involving routine administrative responsibilities the following know-how is of major importance.

A. Skill

1. In keeping adequate and useful records without becoming overburdened with useless details and "paper work."

2. In providing for useful inventories of equipment and material.
3. In pupil accounting and the management of human resources.
4. In using acceptable and efficient methods of purchasing.
5. In interpreting records to gain information for use in guidance and program evaluation.
6. In the utilization of records which show school growth and progress.
7. In reporting to parents, the school staff, and other interested individuals and groups.
8. Other items appropriate to the task.

B. Attitudes

1. A belief that administrative schemes and devices exist wholly for the purpose of furthering the educational aims of the community.
2. A feeling that students have a right, and a responsibility, to share in school administration.
3. A belief that each responsibility carries with it a corresponding degree of authority.
4. A conviction that administrative policies, plans, and decisions must reflect a basic philosophy.
5. A belief that administrative policies need some flexibility.
6. Other items appropriate to the task.

C. Knowledge

1. Of a variety of administrative techniques and tools—budgets, schedules, accounting, and the like.
2. Of record procedures, forms, usages, and interpretation.
3. Of budget making, purchasing, accounting, and related activity.
4. Of the function of reports and reporting.
5. Of schedules and time utilization procedures.
6. Of accident reporting and the legal responsibilities of the teacher.
7. Other items appropriate to the task.

D. Understanding

1. That routine details are not ends in themselves but exist to facilitate action in the furtherance of educational aims and objectives.
2. That, when confronted by an imperative situation not covered by administrative policy, the individual should act to the best of his knowledge and ability; later the action should be referred to the policy-making group.

3. That administrative records and record keeping are not defensible except as they serve to facilitate the learning process.
4. That students and teachers may gain valuable learnings from participating in the administrative function.
5. That there is a considerable body of knowledge dealing with effective administration of programs of public education.
6. That the community has the right to know how its educational funds are being used.
7. That administrative policies when coöperatively formulated tend to gain the allegiance of those sharing in the planning.
8. Other items appropriate to the task.

In doing those tasks relating to evaluation the following know-how is of major importance.

A. Skill
   1. In selecting evaluation activities which will reveal the degree of program effectiveness in reaching agreed-upon aims and objectives.
   2. In providing for testing the administering of prepared instruments, and in the preparation of testing devices to meet unique situations.
   3. In other methods and techniques of gathering information which will reflect program success.
   4. In making evaluation an individual matter for the program aims of each student.
   5. In interpreting evaluation results to interested groups and persons.
   6. In observing effective and ineffective behavior patterns.
   7. In translating evaluation findings into plans for action aimed at school improvement.
   8. Other items appropriate to the task.

B. Attitudes
   1. A belief that evaluation is a continuous and coöperative assessment of the efficiency and effectiveness of the educational program.
   2. A belief that evaluation should build better student understandings and staff morale.

3. A feeling that valid program assessment must be in terms of student behavior changes implied by the educational aims of the community.
4. ✓ A belief that evaluation is not a separate and periodic activity but an integral part of the teaching and learning process.
5. An assurance that honest and factual self-evaluation by individuals is necessary to achieve a valid assessment of the progress of a group endeavor.
6. An interest in determining his strengths and weaknesses as an administrator.
7. A desire that all members of the community understand the aims, needs, strengths, and problems of the school.
8. A feeling that an evaluation, individual, group, or school-wide, is of little value unless it provides implications and directions for betterment.
9. Other items appropriate to the task.

C. Knowledge

1. Of the various instruments and techniques appropriate to the desired assessment.
2. Of the motivation and stimulation necessary for serious individual and group evaluation.
3. Of useful ways and means for identifying the behavior changes implied by the school's objectives.
4. Of the morale factors in personal evaluation, and of the need for the individual to maintain his feeling of security.
5. Of the evaluative procedures wherein professional competence is needed, and of those areas appropriate to student and lay participation.
6. Of ways and means of interpreting evaluation results to interested persons—student grades and progress reports, school strengths and weaknesses, pupil needs, and the like.
7. Of what a "good" educational program for the community "should" be.
8. Other items appropriate to the task.

D. Understanding

1. That effective evaluation should result in stimulation and direction toward improvement.

2. That many, if not all, people develop defense mechanisms which make objective self-evaluation painful.
3. That democracy requires that those being evaluated have a part in the process.
4. That effective evaluation must do more than reveal status; it must provide direction and "next steps" toward reaching goals.
5. That educational experiments are to be evaluated in terms of social consequences (i.e., what happens to people).
6. That evaluation will not be effective unless desired by those who are to participate.
7. That evaluation is not to compare one student with another, or with a group, except when there is need to find out who is best qualified for a particular job or task.
8. That evaluation is not to compare one school with another except as they have similar objectives and situations.
9. Other items appropriate to the task.

CHAPTER 13

Relationships in the Competency Pattern of the Administrator

In the previous chapters repeated warnings have been sounded to the effect that no single element, taken by itself, will produce or will constitute competence. This is to say that the elements of know-how, the elements of theory, and the elements of job tasks must all be present, and there must be appropriate interaction among them, before competent behavior will be possible.

Using the organismic ideas of psychology as a foundation it is easy to see that competence is a combination of many things. As such it is an organismic whole. Since a larger whole is made up of smaller wholes, each of these will have to be considered relative to the purpose that is to be served. The important idea is that competence is the organismic whole which is under consideration when we wish to picture adequate human behavior in a job situation. It has been previously ascertained that the elements in competence are the job tasks, the know-how, and the theory. These three wholes within the larger whole of competent behavior may each be divided into many smaller items. Logically, the process of division can continue almost indefinitely because each whole is composed of smaller entities.

It is all right to seek out and deal with all the various items which go to make up competence, but criticism is in order when the work with elements becomes so engrossing that the type of competent behavior the elements are supposed to further is forgotten. After competence has been dissected and the elements have been studied they must be again assembled into the desired behavior patterns. Consider, for example, the work done by students learning English. Obviously skill in language usage is part of general competence in English. However, should the study of English become an end in itself it loses much of its worth as an element in competence. It is unable to assume the necessary relationships and to interact appropriately with the other elements.

IMPORTANCE OF RELATIONSHIPS

It has been mentioned time and again that competence is a combination of elements. This does not mean a simple lumping together of items like earth and rock lumped together to make a mound. It means the formation of important relationships among the elements, and, since competence refers to the behavior of living organisms and so must be a dynamic kind of thing, these relationships and the elements themselves will be constantly changing and interacting. These activities will occur in response to individual purposes and according to the particular life situations faced.

RELATIONSHIPS AS THE CORE OF THE COMPETENCY PATTERN

The distinctive character of any behavior pattern derives from the varying relationships within that pattern. Thus the various theories, job tasks, and items of know-how possessed by different individuals can be related in a multitude of ways. The possibilities are unlimited. Modern physical science has advanced the idea that everything in the universe is related in one or more ways to everything else. This is illustrated by the law of gravity, by the action of magnetic and electrical fields, by Einstein's theory of relativity, and by similar notions. Further, there are a great many different relationships evident in any given situation. These are so numerous that one cannot possibly consider them all upon any specific occasion.

It is important, therefore, that the human organism is able to discover and put to work relationships which are pertinent to a particular problem demanding his attention. This is the heart of the Gestalt system, and is the factor that can be transposed from one situation to a similar situation. For example, a person will recognize a familiar tune even though it is played in a key in which he has not heard it previously performed. The notes used in playing the tune are entirely different from those he heard when he learned the tune originally. Obviously it is not the notes which he recognizes but the pattern of relationships between the notes. This skill in learning appropriate relationships for a particular situation and then being able to transpose the relationships to similar situations is the crux of human learning and the sort of objective which must be paramount in any educational program.

RELATIONSHIPS SELECTED IN TERMS OF PURPOSE

Conscious activity is based upon what psychology calls perceptual fields. According to the Gestalt psychologists, perceptual fields are composed of items appropriate to an individual's purposes. To all important purposes there will be obstructions, and the individual must organize into his perceptual field (situation) all items which bear upon the subject, arranging them into such relationships as will help overcome the obstruction and reach the purpose. This putting together of elements to form perceptual fields in terms of some purpose is very close to Dewey's "reconstruction of experience." The way the new perceptual field is put together will depend upon past experience, and the individual will use methods that have been successful in the past. The ability to see appropriate relationships is sometimes referred to as awareness. Thus awareness is the learned ability to see many elements relating to the "field" (problem situation) and to make many possible combinations of those elements so as to provide a number of choices or courses of action which seem most likely to solve the problem. Awareness has a great bearing on education because, obviously, all intelligent human action is based upon gathering and combining such items so as to form plans of action. It is evident that a person could never assemble all of the possible items which relate to a particular problem. This in itself will present a problem of selection. Further, a person could never think of all the possible combinations which could be arranged from the items selected as having a possible bearing upon the problem. For example, there are 362,880 different ways of arranging the batting order of a baseball team. If there are that many combinations of order alone for nine different items a person has no chance whatever of discovering all the various relationships which may be possible in solving a real-life problem. Particularly is this true when the task is a complex one such as might be within the province of the educational administrator, where a multitude of factors relate to every task. Thus some principles of relating elements need to be set up so as to facilitate the formation of the most appropriate and desirable relationships.

THE QUALITY OF RELATIONSHIPS

Relationships are neither good nor bad; they become good or bad when arranged according to different ideas. First, the formation of relationships is primarily a function of purpose. The baseball manager does not set up batting orders just to see how many different orders can be arranged; he sets up batting orders to assist in winning the game. The school administrator does not set up competency patterns simply to see how many arrangements of tasks, know-how, and theory he can produce; he wants to achieve the educational goals of the community. It has been pointed out that there is an infinite number of pattern element relationships—but only when one relates items to items with no particular purpose. When a clearly stated purpose is brought into the picture the number of available relationships decreases rapidly. There is a great difference between a simple relationship and a relationship which is going to be useful in achieving a goal.

Second, the element relationships for a particular situation will need to be further limited by being organized according to the particular point of view of the individual who is at work on the problem. This means that the element relationships not only must be in terms of purpose but will in addition be assayed according to some system of values—point of view—that brings the moral idea of good or bad into the particular pattern being formed.

The third limitation to be placed upon the formation of relationships has to do with principles of efficiency. Economy of thought, pattern structure, and actual working procedures are the earmarks of a good relationship pattern. In all kinds of undertakings it is a primary rule that efficiency and economy of operation are desirable qualities. This rule implies the use of the best methods, tested knowledge, fruitful theories, and appropriate skills.

In review, it is seen that *purpose, point of view,* and *efficiency* are three desirable criteria which will be applicable to the formation of relationships. Within the perceptual field of the individual these three should be constantly operating as he proceeds to concentrate upon the various problems which are a part of his job tasks.

SKILLS THAT CAN BE LEARNED

Intelligent use of these criteria—skill in relating a task to be performed to the available and appropriate know-how, and doing so in terms of a consistent point of view—can be taught and can be learned. For example, it is obvious that no perceptual relationship can be formed which will be any better than the facts used in its construction. The authors of this book believe that people can learn to choose the more valid facts and to recognize when facts are available and are pertinent to a problem. This process, and particularly the methods to be employed, will depend upon the application of a point of view—a system of values. The discussions of the Competency Pattern showed that consistent behavior in terms of a point of view is one of the criteria of this behavior pattern and is one of the more important of the distinguishing characteristics of any high-quality behavior. It may be noted here, therefore, that this organizing of one's behavior so that it consistently reflects his point of view is a skill that can be learned.

An example of application of a point of view may be drawn from a very ingenious chain letter which has recently been going around. This letter has the usual earmarks of a chain letter with two rather important exceptions. First, it was not sent through the mails but was transmitted by hand from one person to another; actually the conditions required that the letter be "sold" to those who wanted to participate. Second, it required the outlay of ten dollars in cash. Numerous people participated in this enterprise because they could see nothing wrong in it, and it was a fine chance to make some money. Obviously this kind of thing required the application of some of the big principles which make up a person's point of view. Some did not participate because it was a form of gambling and "all gambling is wrong." However, other, more intelligent minds reasoned that the farmer gambles when he makes an outlay for a crop, and the insurance company gambles when it sells you a policy. The chain letter was certainly gambling but was it a "good" or "bad" form of gambling? The simple criterion of gambling is not sufficient to deal with this situation. However, when the matter is related to a person's point of view regarding the social effect of the gambling it is immediately seen that the chain letter idea does not produce any goods or services and therefore is not a "good" form of gambling. Although we do not assume that the educational administrator will be concerned with chain letters, he will have many occasions to apply his basic point of view as he carries out his job.

A great deal of emphasis is placed upon the notion that skill in using such criteria for forming quality behavior patterns can be taught and can be learned. This has a number of important implications. First, it indicates that the human organism is born with the possibilities needed to develop desirable behavior patterns, but that such a development is in no way assured. The organism can also develop undesirable patterns. This is where educational programs are of the utmost importance. Intelligent behavior is too valuable a thing to leave to the mere happenstance influences indigenous to the time and place of the individual's growth and development.

RESTRICTION AND SELECTION NECESSARY FOR QUALITY RELATIONSHIPS

It now becomes apparent that quality behavior is a result of a process of restricting and selecting. It must meet certain standards. To result in competence, element relationships must conform to certain criteria. This idea of selection and restriction may at first seem to imply that competence is a narrow and standardized kind of behavior. As will continue to be shown, such an implication is far from the intent of this book.

In talking about selection and restriction an important factor is sometimes overlooked. It refers to the number of elements from which the final selection is to be made. If there is only a single way of acting, no selection is possible. If there are two possible ways of acting, there is a choice but not a very wide one. If there is an infinite number of choices, the possibility of having available one which is appropriate to the situation is much improved. Thus the administrator must be skilled not only in making the right choices but also in realizing the many possible alternatives. The quality of his behavior will be directly proportional, therefore, first to his skill in realizing the many different combinations or relationships which are possible in a task situation and secondly to his skill in choosing those relationships which are most appropriate. Naturally the choice, as has been pointed out, will be made in terms of a consistent point of view and in terms of economically serving the purposes and aims assigned to him—educational growth for the total community.

A PUBLIC RELATIONS PROGRAM

Some of the elements and some of the important relationships which are to be found in the competency pattern of an educational administrator may be seen in the public relations program. First, there is need to identify the task. It is well and good to say that the school should have a public relations program. But exactly what should be done? Shall there be newspaper advertisements to induce the public to support the schools? Shall there be mass meetings? Shall there be organizational campaigns? Just what tasks will be included in the public relations program?

Even before the tasks are selected it is seen that the point of view—the basic theory—will enter the picture. Obviously there should be a closer tie-in between the school and the community. This is a definite need and demands definite action. However, there are a number of choices to be made in coping with this problem. The school may be "sold" to the community; the people may be drawn into some of the minor activities of the school so as to give them the impression that they take part in running the school (and they will thus support it with their money), though actually they will have no real voice in its operation; or the community may be actually involved in making the decisions as to the kind of school they desire and thus will automatically support the school because of a real interest and desire to see their decisions carried out. Thus the narrowing, selecting, restricting kind of activity necessary for a consistent behavior pattern will immediately begin to operate in these relationships. If the school administrator is a proponent of a democratic way and subscribes to the notion of the dignity and worth of people and their right to participate in decision making, the first two choices will be immediately ruled out and the administrator will be concerned with actually getting the people involved in deciding what the school is to do, where it is to do it, how much money can be made available, and all the other important steps toward creating a good school system. Notice that this procedure has nothing to do with such technical matters as how to teach reading to the first grade. This is a job for a specialist. It is not within the province of the community group. However, under the assumption earlier stated it is the prerogative of the community to decide whether or not they wish their children to be taught to read. It is apparent that the administrator has limited this task and has brought it into direct focus by the application of his basic point of view. He is not now going to try to sell the community anything. He is not going to try to force the community to do something that they do not want to do. His task has become one of getting community leadership concerned with deciding just what the school is to do, and with providing the support necessary to activate the decisions.

To continue with the elements involved in the task of building a public relations program: Within his perceptual field (conception of the situation), the administrator will begin to bring into focus all the various know-how facts which may be applied to the problem of "public relations." He will want to ascertain facts about the population—population trends, population location as to age groups, and the like. He will need to involve the community in making this survey, both to enlist their aid in gathering the necessary facts and, of more importance, to make sure that the members of the community will understand the problem. He will need to stimulate the people to make some decisions as to the kind of school program they want. This will mean presenting facts which indicate "needs," showing what other communities have done, relating the facts to the unique situation of the particular community under consideration, and all like matters.

Here too will enter an important point: the understanding that the physical plant of the school is to house the program and not that the program must be made to fit into a predetermined physical plant. When used as one of the operational bases of the community this understanding will prevent the tragedy of building the physical plant without first deciding upon the educational program it is to accommodate.

It is emphasized that one of the tasks of the administrator is to become "aware of," "to visualize," to form a "perceptual field" of the situation which is demanding attention. Within his perceptual field he will gather and evaluate ideas, form plans of action, and coöperate with others in the formation of plans. In each instance he will also evaluate the results of actions taken and try to improve plans and increase his skill in executing them so as to achieve the educational purposes developed by the community. In each instance, too, his basic point of view will be a factor. For example, what is his point of view regarding the function of leadership? There are a number of understandings about leadership, many of them incompatible with the previously assumed democratic concept. Similarly, there are various understandings about the nature of authority. Where does authority lie and who possesses final authority? These questions, if the administrator is sincere, must be referred to his point of view. Unless he possesses a well-thought-out point of view he is going to get into difficulty because he will have no reference points to use as guidelines in making decisions. Without these guidelines he will inevitably vacillate from one theory to another, to a third, and so on. He will soon become a person devoted to the shifting forces of expediency and will degenerate into an opportunist of the worst kind.

Following along the same lines will be a great variety of items in the categories of know-how. It is important to recognize that "know-how" cannot be successfully separated from the "person who knows how." That is, know-how is the product of an individual's meaningful experiences. Over a period of time one is bound to accumulate some fallacious ideas, some undemocratic habits, and some attitudes which are not in the best scientific tradition. Unfortunately these fallacious and undemocratic and unintelligent items of know-how may enter into behavior patterns, combinations, and relationships just as easily as may others which are more democratic and more factual. Here again, quality relationships are produced by a process of restriction and purposeful selection. Further, quality behavior is a continual and dynamic process of combination, testing, refining, recombination, retesting, and so on. A task will be done in a certain way depending on the point of view held by the doer. This might be considered the selection of the method to be used in performing the task. At the same time his store of facts and skills—operational equipment—is brought into play. However, at this time some of the fallacious facts and abilities he is burdened with may be ruled out so that his know-how will be refined. Concurrently, in carrying out this particular task he will accumulate some new experiences, which may throw additional light on needs and purposes, which will tend to refine the job tasks. Just as in the public relations program the task became one of stimulating the community into making decisions about its school, so in every task the general need underlying the task may be reviewed and refined so as to produce a somewhat similar but more appropriate task. Continually, but admittedly at a much slower rate, this accumulation of experience will cause the individual to revise and reëvaluate his theory structure—point of view—so as to make it more effective and more consistent. Thus the cycle feeds itself, each item of competence refining each other item.

At the same time it is obvious that this process could easily degenerate into the inverse of refinement. If the needs and purposes are never related to a point of view, each need will be taken care of by whatever expedient happens to appear at the moment. This will lead to inconsistency in the use of method and then to inconsistency in the items of know-how brought into play by the various methods. These know-how items are bound to be incongruous because of the incongruities which will always appear in the use of the methods of expediency. Likewise, a basic and consistent theory will tend to break down because the use of just any method and just any bit of know-how will soon make it appear that there is no need for fundamental theory. It may be noted in passing that this kind of thing is a probable cause for the prevalent modern notion that somehow theory is not practical.

SUMMARY

The development of the appropriate pattern relationships needed for competent educational administration is a task upon which the administrator must constantly work. Relationships seem to occur in three important kinds of situations. First, relationships are in terms of purpose to be achieved; second, they are in terms of a basic point of view—theory; third, they are in terms of an efficient performance resulting in economy in achieving purpose.

All of these relationships appear in what the psychologists refer to as a perceptual field. It was noted that the relationship criteria are restrictive and selective. However, these restrictions and selections are not designed to cripple the competency pattern but rather to bring about a certain degree of quality. Thus they intensify the need for having a great number of alternatives from which to select.

Finally, the criteria for quality pattern relationships tend to cause the individual to refine his competency pattern—pattern of behavior—toward a point of showing more and more quality. Out of the infinite number of relationships which are constantly occurring the administrator needs to be able to select those which are appropriate to his job tasks. It is believed that this skill in visualizing relationships so as to have alternatives and then selecting the best relationships available is one which can be learned. Further, this kind of learning will need to be a major item in the program of education because there is no assurance that it will come about except as a purposefully taught and learned ability.

PART IV

UTILIZATION OF THE COMPETENCY PATTERN CONCEPT

CHAPTER 14

Development of a Competency Pattern on the Job

Parts I to III of this work have developed a concept of a particular kind of behavior pattern called the Competency Pattern. Many pages have been devoted to picturing the idea and showing why it is the only logical tool at present available which can be used to describe a competent individual. Having completed this task of describing and justifying the Competency Pattern, we shall now deal with some uses for the concept. It is the purpose of Part IV to examine some possible applications of the Competency Pattern, with no attempt to give an exhaustive listing. This discussion will be limited, but the future will undoubtedly reveal a much greater variety of ways in which the Competency Pattern can provide a needed service.

PATTERN MEANINGFUL ONLY WHEN IN USE

As a dynamic behavior pattern the Competency Pattern obviously does not have a great deal of meaning until it is put to use. It is in many ways analogous to the blueprint for a bridge. The blueprint pictures something that is of value, but if the bridge is never constructed the blueprint in itself is not of much practical worth. In like manner the Competency Pattern gives a picture of a desired kind of behavior; however, if it is never put into operation the description will be of little service.

Also, as has been stated many times, the pattern is of most service when it is viewed as dynamic, and you cannot have a dynamic operation without putting something into use. For this reason the Competency Pattern is not meaningful under any other circumstances. It is built upon the pragmatic idea that the real meaning of a concept will be brought out only when the concept is put into practical and dynamic operation. This is another reason for saying that the pattern is of no significance until it is used.

As a descriptive tool the pattern has two very fine possibilities; indeed, without proper application of both of these the pattern will not be serving to its fullest capacity. First, the Competency Pattern supplies a picture. A fine painting may effectively portray the beauty of a tropical sunset. A photograph may picture a person's profile. Fine prose may reproduce an author's thought patterns and fine poetry depict his emotional processes. In similar manner, the Competency Pattern can picture an individual's behavior when he is performing a job in a competent manner. By using a configuration composed of interrelationships between tasks to be done, the know-how needed to do the tasks, and the operational beliefs and values reflected in the performance of the tasks, one can describe the desired behavior.

But this is not the whole story with respect to the descriptive powers of the pattern. The picture of the sunset shows the beauty of the scene and fulfills its mission at that point. Yet it in no way describes how a person would construct a sunset. The Competency Pattern goes a step farther; it indicates how to go about achieving the desired behavior. Like the blueprint, it not only gives a description of the thing to be structured but contains "how-to-do-it" information—implications regarding the kinds of activities necessary to achieve competence. Further, the pattern implies procedures appropriate for evaluation purposes. Does the individual act in a consistent manner and base all of his actions and judgments upon the same well-developed system of values? If so, he is fulfilling one of the requirements of the Competency Pattern. Does the individual use the best in the way of knowledge, skills, and techniques in performing his job? If so, he is fulfilling another of the criteria. Has the individual clearly identified the tasks which make up his job, and is he able to concentrate upon those that might be termed critical? If so, he is fulfilling an additional pattern criterion.

All of these things point out the necessity for putting the Competency Pattern to actual use so as to derive its major benefits. These benefits are to be gained from having (1) a well-described portrait of the competent person and (2) some effective directions for achieving competence. They will be seen both in individual patterns, which might be called behavior patterns, and in group patterns, which may be thought of as the overall competence of the social group.

GROUP PATTERNS CONTINGENT UPON INDIVIDUAL PATTERNS

Since one of the major purposes of this book is to deal with the problem of developing improved school administrators, it is evident that the Competency Pattern should be applied first to the job of the school administrator. At the same time there will obviously be a number of different patterns appropriate for the other members of the community. Here we have a starting point for the use of the Competency Pattern. By beginning with the tasks which each person needs to do we are led to see what kind of value system he will use in his operations. Although the doing of many of these tasks will be an individual affair, the value systems appropriate to performing all the tasks cannot be an individual kind of thing. That is, each individual cannot have a value pattern which is completely different from that of every other member of the group. Without common values the community could not exist. Thus there will be a core of values common to all the competency patterns of the community, and each individual will need to operate under a somewhat similar value system. The group pattern will be contingent upon each of the individual patterns, yet the individual patterns will reflect to a considerable degree the value system of the entire group. A community characterized by a rather high degree of consensus on philosophical values, plus a wide understanding regarding the tasks which are to be performed by each individual, will be one in which each person understands his responsibilities and is free to carry out his work.

EFFECTIVE PATTERNS AND FREEDOM OF ACTION

Doubtless each competency pattern is a personal thing and of a continuing nature. That is, an individual never completely finishes his pattern but continues to improve it as time goes by. Therefore, it is hypothesized that a community where each individual is working upon his own competency pattern of individual and group behavior will possess much freedom of action.

Although there will be controversy, and controversy is not to be looked upon as bad, each person will be working to improve his value system. He will come to know more clearly what assumptions are basal to his value judgments and, perhaps of equal importance, will know the value patterns of his associates. This is bound to result in better understandings and to provide a more serviceable basis for community operations. In addition, individuals who are engaged in developing personal competency patterns are going to insist upon a rather clear definition of the work that will be their personal responsibility. The result will be a more cohesive and freedom-producing community where each individual will be aware of his responsibilities within his area of work performance. Division of labor is a necessity; and a democratic framework requires that each individual be aware of the reasons for this work, have a part in deciding upon the work, and know very clearly what his tasks are to be. These conditions will insure both individual freedom and the coöperation which division of labor requires.

Thus it becomes evident that there will be no such thing as a standard pattern or even a few different kinds of standardized patterns. Each person will have his own pattern, which will reflect not only his unique abilities but also the unique job that devolves upon him because of his position in the community.

UNIQUE COMPETENCY PATTERN FOR EACH ADMINISTRATIVE JOB

Since administration is concerned with the management of materials and persons so as to accomplish purposes, each community will require a different administrative competency pattern. There will be common elements in the administrative patterns of all communities but each administrator will need to recognize the unique possibilities in his community and in his job. The administrator in the highly democratic community will not need so great an emphasis upon the democratic factor within his own personal pattern. The administrator in an autocratic community will need to develop strong capabilities with regard to building up a democratic organization as part of his competency pattern. In a community which is closely knit as to value patterns an administrator will not need to do more than work for a careful evaluation and constant bringing up to date of the existing value systems and behavior patterns, whereas in a community where there is little common understanding of the value patterns subscribed to by the individual members of the community he will face a very different situation.

Even though each administrator's job will have unique characteristics it will also have certain characteristics common to all administrators' jobs. Since there is doubtless no single community wherein all members understand clearly the work to be done by each member, it will always be part of the job to gain better understandings as to task responsibility. Since probably no community has a completely worked out system of values, this is an important challenge. There will always be the tasks of getting people together, making decisions, collecting materials and things, and providing for the execution of policies and plans which have been formulated. Throughout all these activities the administrator will need to continually evaluate his position as it affects the educational progress of his community.

IDENTIFICATION OF THE ADMINISTRATOR'S ROLE IN HIS COMMUNITY

A number of items enter into the particular and specific role of the administrator as he goes about his duties in his community. They may be divided into groups—those which tend to assist him in making his job function and those which tend to block his efforts toward program improvement.

First may be considered some of the things which will assist him: (1) The job of school administrator is usually not a new one for the community and it will already have tasks and certain prestige factors to its credit. (2) Most communities are interested in coöperation although they frequently do not know the appropriate techniques or machinery to make it possible. (3) Communities usually expect a fair amount of change when a new administrator is brought in, so the new administrator will have considerable freedom in bringing about changes which he deems necessary.

On the other side of the ledger will be a number of items which serve as drawbacks to the development of an effective leadership role. (1) The power or influence structure of the community may not be built upon democratic precepts and may resist efforts by the administrator to make it more democratic. (2) The previous administrator has been serving in a particular role in the community and it will be somewhat difficult for the community members to accustom themselves to an administrator in a different role. (3) Tasks are frequently given to an individual because of his job position, often without any consideration of his ability. The school administrator will be called upon to do many tasks which do not fit his particular qualifications. And there will be tasks for which he is properly prepared which the community will not think to assign to him. Thus he will need to do some careful estimating and some careful work to change the community's conception of his role so that his abilities can be more effectively used. Of course, this must be a give-and-take proposition so that his behavior pattern will reflect to a large degree both his abilities and the desires of the community regarding the tasks he is to perform.

This clarification of roles, not only the role of the school administrator but also the roles appropriate to other members of the community, will be most easily accomplished when all are working on improving their patterns of competent behavior. There is no better way of getting community coherence than to have each member work to clarify his own beliefs and value patterns and make them a part of the community value structure. At the same time the value patterns are being developed it is desirable to have each person seriously considering the tasks which he should do and the know-how he will need in order to successfully carry them out. As each person gets an understanding of the meaning of competence and takes the responsibility for improving his own personal competence there will undoubtedly be effective community growth. And it will be democratic growth because each person will be, to the extent of his level of development, engaged in the direction of his own welfare and the improvement of his own capabilities.

THE ADMINISTRATOR'S TASK

The educational administrator will have a number of critical tasks, on different levels of importance. Those on the simple mechanistic or habit level will include the "simple" skills of driving an automobile from place to place, answering the telephone, and so on. Those on a higher level of skill, the technical tasks, will include preparing budget items, using certain testing and survey techniques, and the like. Finally, those at the highest level will involve stimulating people to make decisions regarding the purpose and nature of the school system and to carry out previously formulated plans and decisions. As in all socially significant work, these leadership tasks are of greatest importance to the success of the administrator's work.

This tends to point up the fact that in certain tasks a great deal of compromise will be possible whereas in others compromise cannot be permitted without jeopardizing the integrity of the whole program. It will be at the latter points that the administrator must hold fast to his concepts regarding his role in the community.

Of immediate interest to the administrator will be the competency patterns of the teachers and staff members within his direct managerial responsibility. They provide an excellent place to start improving competency patterns throughout the community—excellent because here his influence will be most easily applied. The administrator can learn to use the constructive sources of influence—respect and affection—and can improve his own competence by learning not to use the unconstructive sources of influence such as fear, bribery, and the like. What better way is there to provide for the in-service growth of teachers than to get each teacher interested in improving his own pattern of competent behavior?

CHAPTER 15

Improving Preparation Programs Through the Competency Pattern

Chapter 14 noted that the Competency Pattern not only describes a particular pattern of competent behavior but provides directions for achieving that competence. We shall consider these two functions in connection with the improvement of preparation programs.

COMMON ELEMENTS OF INDIVIDUAL COMPETENCY PATTERNS

As was said much earlier in this book, each person has a unique and individual competency pattern. However, we do not mean to imply that there are no common behavior pattern elements and that no synthesis of individual patterns can be achieved. It *is* an assumption underlying this theory of preparation programs that it *will* be possible to synthesize a number of individuals' competency patterns and that such synthesis will reveal the common elements indigenous to a particular area of job performance—in this instance, educational administration and supervision.

When the Competency Pattern is applied to a large number of specific situations—competent individual behaviors—a great many interesting points should come to light. As these many specific situations are synthesized into one overall picture of educational administration, several generalities will be in evidence. First, there will be an appropriate and generally used theory of administration, composed of operational theories that are used in actual administrative practice but refined because it has passed through the rigorous evaluation of the Competency Pattern. Second, there will be the appropriate and generally used tasks of educational administration, the things the administrator will need to do if he is to adequately perform his job. They too, because of having passed through the same refining process, will reflect agreement with the theory of administration and with the generally accepted purposes of educational administration. Third, there will be the appropriate methods to be used in educational administration, which will depend, of course, on the theory or value system subscribed to by the administrator. However, a preparation program that will be suitable for more than one person must be built upon a synthesis or generalized statement of the common elements which appear in many situations involving educational administration. Fourth and last, there will be the know-how—the generally used understandings, skills, and knowledges—of educational administration.

The kind of process described above is in several ways similar to various job analyses which have been done in other areas, where the tasks are, by and large, highly repetitive and demanding of mechanical skill, and where a qualified observer can easily see and evaluate what the competent performer does. This may be illustrated by the routines followed by the operator of a punch press or by a welder as he joins two sections to make a portion of an automobile body. Although such job analyses have been successfully used in these areas for a long time, they have never been very successful in the more complicated jobs—the professions, administrative work, and the like—presumably because the kinds of relationships which occur when an administrator makes an important decision, for example, cannot be adequately shown. The complexity of the administrative job is enormous. Whereas the punch press operator can choose among only a relatively few instruments and make judgments within only a narrow range of element relationships, the educational administrator has an infinitely large number of choices, both as to materials and as to judgments. Because of the limited choices available to the punch press operator, it was never deemed necessary to ascertain the assumptions under which he was doing his job. Although this was probably a mistake and resulted in some difficulties, it did not make the situation entirely impossible, and it did allow the job analyses which were done to function successfully. However, there is no way to ascertain the appropriate selection and judgment relationships in educational administration without bringing into the picture the administrator's operational theory. Whether it be called a value system, operational beliefs, social consciousness, or something else, it indicates the assumptions which direct the individual's behavior. A little reflection will show that the inclusion within the behavior analysis of theory or value system materials, as well as the generally used items of skills and knowledges and the generally used statement of the tasks to be performed, will make the job analysis technique definitely more successful, and appropriate to all kinds of job situations, no matter how involved.

DIVISION OF LABOR AND THE COMPETENCY PATTERN

The Competency Pattern contains another important implication for preparation programs. The idea is not new and is already widely accepted. It is that each person has certain tasks to perform, largely services to others, as he fulfills his daily obligations of living in a coöperative and democratic society. Of course, others are at the same time performing services for him in return. The division of labor has long been recognized and is the basis for our modern social and industrial structure. Thus, there is nothing unusual about saying that each person engaged in a preparation program will have certain tasks to perform. Almost all of them will be similar to the tasks performed by other individuals within the group—persons pursuing similar educational objectives—but some tasks will be unique and devolve upon only one person. It seems almost a truism to say that if each person could recognize his tasks and responsibilities and properly carry them out the preparation program would indeed be successful.

The problem here becomes one of applying the Competency Pattern to the tasks of all of the people who will have a major role in the program of preparation. At this point the designing of a preparation program tends to become rather complicated. It is obvious that the things the competent man does in the actual performance of his job—the job for which the student is preparing himself—do not necessarily indicate directly the kinds of experiences the student should have so that he in turn may become competent to perform this job successfully. For example, the Air Force student pilot, who is to fly a supersonic combat aircraft, is not immediately taught to fly this aircraft. He is first put through certain rigorous training, taught certain knowledges and skills. He must have experiences in the less complicated and more easily controlled aircraft. Finally, upon successful completion of these preliminary learnings, he may be given instruction in the more advanced type of aircraft.

In like manner, if it is shown through application of the Competency Pattern that one of the job tasks of the educational administrator is to prepare a budget, it does not follow that one of the immediate educational experiences of the students should be to prepare a budget. Many things must be learned about how one gets to be a successful preparer of budgets before it can be said just what learning experiences will most efficiently prepare the student to become a successful administrator of budgets.

To return to the idea of the tasks which fall upon each person connected with the preparation program: It is rather obvious that the most important tasks are those which concern the job of the student. The student is the primary person within the preparation program and it is the job of the professor of educational administration to *help* him become the kind of administrator that he desires to be. The professor does not *mold* or *make* the student into a competent administrator. Only the student himself can do this, but he needs a great deal of help. Much of this help can be given by the professor. Thus, all the activities must revolve around the student so as to provide the educational experiences he needs to become an effective performer in an administrative role.

SOME FALLACIES OF PRESENT PROGRAMS

It seems to be axiomatic that each person is more concerned with his own affairs than with the affairs of others. This book does not intend to disparage in any way the need of personal concern for one's own affairs. It is only upon this basis that the student becomes educated with any degree of efficiency. However, this very human reaction is the cause of pronounced difficulty in the setting up and operation of the preparation program. It goes without saying that most programs for the preparation of educational administrators are set up by professors of educational administration, and this is the way it has to be. It would be extremely difficult, though not impossible, for a person who knew nothing about the field to set up a successful program for the preparation of educational administrators. But because people are primarily interested in their own affairs and tasks, the professors of educational administration, in setting up a preparation program, tend to concentrate upon the *tasks of the professor* of educational administration and to let the student's tasks become secondary.

It is almost as if a group of horse trainers were to organize a program to prepare horses for the circus. They would undoubtedly discuss and describe the things that they (the trainers) would do to the horses in order to train them for circus life. The professors feel somewhat the same way when they set about listing the things they feel they must do to their students in order to turn out successful practitioners of the art of educational administration. In each case the recipient of the training has little to do except follow instructions. The horse trainer, asked about the tasks of the horse undergoing his training, would simply reply, "To follow my instructions." The traditional professor of educational administration, asked what tasks devolve upon the student, would probably reply, "To follow the instructions given him by the professor of educational administration."

Under the older psychologies of learning—faculty psychology, mental states psychology, or behaviorism—the program described above would be perfectly suitable. However, it is now realized that the individual who is preparing to be an educational administrator is in many ways different in his learning capacity from the circus horse. The facts that problem-solving activities seem to provide the most efficacious ways of learning and that the learner must be fully aware of and proceeding toward his own purposes before his learning will be very effective have pointed to the tasks of the student as being of primary importance to the successful operation of any educational program.

This belief in the need for placing students' tasks first is further reinforced by certain democratic assumptions: that people *can* learn to become self-directing; that individual self-direction is one of the more important goals of a training program; and that people do not have to be driven into doing disagreeable tasks to become educated but become educated in the best manner when they realize a serious lack in their own personal capabilities and set about, under their own direction and power but with the help of others, supplying this deficiency.

ELEMENTS OF A GOOD PREPARATION PROGRAM

In order to organize a comprehensive preparation program, a number of competency patterns will have to be developed from the activities of various individuals and groups performing educational administrative jobs and synthesized so as to reveal the generalized operational theory, the know-how, and the job tasks which are expected to accrue to the practicing educational administrator. It will then become possible to formulate the tasks of the student. For example, if one of the elements of the competency pattern synthesis is "To use the scientific method in making a study to determine the educational needs of a community," it will follow that one task of the student of educational administration will be to *learn* to use this important method. The task becomes increasingly pertinent if the competency pattern shows that the administrator uses the scientific method in many and various phases of his job. The immediate implication is that the professor of educational administration must help the student to understand the need and to learn the method.

However, it is not yet clear how this objective is to be reached. Perhaps it should be broken down into smaller units. For example, it is not very intelligent to say what the student should do to learn the scientific method until his present proficiency in that method is known. Therefore, the first task of the student is to evaluate his ability and the first task of the professor is to point out the need for this evaluation and suggest activities which may reveal the developmental status of the learner. In addition, the student's consistency in point of view should be assessed. As was noted, one reason the Competency Pattern can be used on a complicated activity is that it makes use of theory, operational beliefs, or a value system. The student should have a consistent point of view and should be proficient in applying it to all of his professional and nonprofessional activities. Here again the student should evaluate and improve his point of view and its application, assisted by the professor, who should make clear to the student his need for a consistent point of view, help him evaluate his present point of view and his consistency in its use, and suggest activities for strengthening the point of view and increasing facility in its application.

Many learning activities may be integrated into one overall activity. There is nothing to suggest that learning to use the scientific method and developing an improved point of view cannot proceed simultaneously. And obviously the countless skills needed by the educational administrator and the great body of knowledge which he uses in solving his problems must also be integrated into the learning activities of the student.

ORGANIZATION OF LEARNING EXPERIENCES TO ELICIT THESE ELEMENTS IN PROBLEM-SOLVING SITUATIONS

As the above-described elements of tasks, methods of working, operational beliefs, and know-how become identified and, of course, added to from time to time as increasing knowledge is gained about the job of educational administration, they will have to be organized so that they will appear in learning experiences. In addition, it is important that these learning experiences be of the most efficient type.

At this time we may mention again the problem of transfer of training. If the student learns to use the scientific method in one type of situation, will it be available to help him when he faces a different kind of situation? The answer is that he will be able to transfer the method to other situations if he has achieved an understanding of the great scope of the technique and the variety of problems wherein it is applicable. Once the professor has made the student understand what the educational administrator does, the kind of beliefs he holds, the consistencies he needs in applying those beliefs, and the knowledges and skills he uses, the student must carefully evaluate his own capabilities in each area and determine what level of development he has reached and what additional proficiency he must gain in order to be considered competent in that area. With these other understandings he can achieve a much greater degree of transfer in his training program. If the professor suggests that he participate in a graduate seminar which is investigating some pertinent problem in education, the student will immediately know why. First, this activity is a good way to develop one's point of view and to consistently apply it. Second, it will certainly bring into play the scientific method, and although the student may never use this method on a similar problem, he will understand that the experience is to give him skill in using the method which he can transfer into many and varied situations. Third, this work will undoubtedly increase his ability to use the group process and to gain consensus with others of his group.

The point is that while seminar experiences have always contained the above elements the student has not always recognized why his training included these experiences. Thus, although he successfully applied the scientific method to the problem at hand, when confronted later with a different kind of problem, yet one definitely calling for the use of the scientific method, he was unable to apply it. Likewise, although he developed a very fine rapport with the members of his seminar group, he did not understand that this was a learning experience so that he could develop the same sort of relationships with all the groups with which he would be working. So he would go out on the job and be unable to establish democratic working relationships with the members of the school system. All of this is to point up the simple fact that unless the student is aware of what the educational experiences are for, and unless he realizes that there can be a transfer of the important methods and skills used therein to other areas, it is doubtful if they will ever transfer when he actually needs them on a real job in administrative practice.

This kind of training program will need the services of a great variety of evaluative instruments, many of which have not yet been completely developed. If the program is to be efficient the professor must be able to help the student ascertain his deficiencies. In addition, there must be some method whereby the student can measure his progress, and be assured of a minimum degree of proficiency when he has reached a certain level, in five general areas: (1) the area of reflective thinking, including the ability to use this method in all kinds of problem-solving situations; (2) the area of the application of a consistent point of view; (3) the area of democratic processes and their application to group problems; (4) the area of working with groups and the use of the group process; and (5) the area of technical skill and items of know-how. This need for evaluative instruments is beginning to be met, and it is envisioned that more and more instruments of increasing validity will be forthcoming.

SUMMARY

In summary, we may point out some of the contributions of the Competency Pattern when it is used as a basis for improving preparation programs. It gives a picture of competence for a particular area and, in an idealized and refined form, provides a yardstick for evaluating behavior. It identifies the commonly used methods, theory, tasks, understandings, knowledges, and skills appropriate to the area. It indicates the assumptions and operational beliefs held by an individual who performs competently in that area.

A further and very important contribution of the pattern is its conception of *tasks* and the idea that an appropriate division of labor can be determined by listing the tasks which each member of the organization will perform. The Competency Pattern will help to identify the tasks which the professor of educational administration should perform as he goes about his job of facilitating the preparation of educational administrators and the tasks which should be performed by the student of educational administration as he endeavors to become competent in his chosen field.

The learning experience may well include both the establishment of a basic point of view and the development of methods, skills, and understandings. However, unless the student has a clear realization of why he is subjecting himself to this experience, there is no assurance that what he learns will transfer to actual on-the-job task performance. When put into the context of the training program, this means three things. First, the student must understand his level of development. Second, he must understand what level of development is appropriate for the practicing administrator. And third, he must understand just how the specific experiences of the training program are designed to help him improve until he has at least a minimum degree of competence.

Further, the student must understand the possibility of transfer of skill and training and be continually on the lookout for ways and means whereby he can transfer his abilities to new situations. The best kind of learning, and the kind which transfers best, is accomplished in a problem-solving situation. Indeed, it will be disrupted or destroyed if the student is forced to engage in extrinsically motivated tasks simply to please the aims of his professor.

All of this reflects a genuine belief in the ability of a student to have fine motivation when he presents himself for training, to understand the objectives of the training program and the activities necessary to reach those objectives, and to be a self-directing individual who does not have to be driven to improve his capabilities but who does so under his own power, asking not for prescription but for help in ascertaining his shortcomings and eliminating them. The *primary* tasks are those of the student. It is the job of the professor to help the student in self-evaluation, to help the student select learning experiences, to suggest ways and means of improving, to help the student evaluate progress, to help the student decide upon further learning experiences. He must never prescribe purely by virtue of his position and on the basis of what he thinks is good for the student without first making sure that the student understands what each activity is supposed to accomplish. If the tasks of the student are placed first there will be no need to be concerned about paying individual attention to each training program. The student will, without a doubt, have an individual program, because it will be his program, based upon his objectives and aimed at alleviating his shortcomings. The professor will not be prescribing a set routine for all of his students but will be assisting each one as he makes his own plans for individual growth and development.

As the administrator finishes his formal training and goes to work he will perform his tasks in actual situations enabling him to more accurately demonstrate what competency pattern is appropriate for his job. There will then be more competency patterns which can be incorporated in the synthesis to give a better picture of the job of educational administration. In turn, this will better show what the student will need to learn in order to function successfully and will, to that extent, alter the preparation program. The alteration of the preparation program will bring about more skillful administrators, who will produce more consistent and more adequate competency patterns, which will make possible more effective programs of preparation. This process has no end; it can be continued as long as there is any need for schools and for administrators to facilitate their functioning.

CHAPTER 16

Other Uses of the Competency Pattern

It has been demonstrated that the Competency Pattern is a very useful tool to apply to the work of improving preparation programs in educational administration. By giving adequate job descriptions, by giving portraits of individual competence in jobs, and by implying the kinds of training which will be most effective, the pattern attacks the problem of getting more efficient administrators. What other important uses has this tool? It is the purpose of this chapter to look at some other jobs wherein it may be used to advantage. If the following topics appear to be somewhat disconnected it will be only because the Competency Pattern has a wide range in solving a great variety of problems, some of them far from the original purpose of the pattern, namely, the improvement of training programs in educational administration.

In each of the following topics the Competency Pattern can be best demonstrated by showing how it would operate to assist in solving the problems involved—by providing a set of directions for a course of action—and then predicting the outcomes likely if this course of action is followed.

THE COMPETENCY PATTERN AS A PERSONAL DEVELOPMENT GUIDE

The basic assumptions underlying this book hold that people *can* be self-directing and *will* make proper and adequate decisions if they have the necessary information. An extrinsic force does not have to be applied to make people do the "right" things. They will, however, need something to use as a guide for their personal development. Of course other people are always available who will be willing to guide them, and one may easily use another individual as his guide. But such an arrangement usually works out to the detriment of the learner, who would do much better to use a set of ideas as his guideposts, rather than following blindly the actions of someone else. It is in this connection that the Competency Pattern provides an excellent framework for personal development. It is no accident that the ideas basic to the Competency Pattern are the very same ideas which are appropriate for the overall personal philosophy of an individual who is interested in becoming educated. The pattern does not *prescribe* the basic values to be used but insists that a *consistent* set of values be incorporated.

The Competency Pattern also causes these items of personal philosophy (values) to be exercised in the daily experiences of living and working. And it requires the individual to understand just what things he must do (tasks) in order to reach his development goals.

Thus, the Competency Pattern indicates that a person may become educated by developing a consistent point of view, by learning to apply this point of view to the important tasks of his work, by carefully ascertaining the proper tools and methods to be used in performing these tasks, and by developing the skills, knowledges, and understandings which are needed to perform the tasks. Naturally, wide application of the Competency Pattern in this area would result in many more educated people. They would, of course, be educated people of a particular kind, namely, individuals who democratically set out to work with others in improving the social structure and at the same time to make the best possible individual contribution by becoming personally competent in those tasks which suit them best.

THE COMPETENCY PATTERN AS A MENTAL HEALTH TECHNIQUE

In a somewhat similar vein, although in many ways from a different standpoint, the use of the Competency Pattern as a mental health technique opens up the possibilities of a vast area of service. People are the only animals that theorize (symbolize and intellectualize) about their activities. Other animals can learn in limited ways and to a limited extent. Other animals have greater physical prowess and seem to have equal or better systems of muscular coordination and control. It is only in mental ability that human beings find unique excellence. And of course human beings are the ones who suffer most often from an unhealthy mental condition. There seems to be a direct connection between this unique ability to theorize and the unhappy ability to become mentally unhealthy. This is not to imply that theorizing is bad and brings about mental difficulties, but to suggest that possibly the mental health difficulty is due to the lack of an adequate and consistent use of the ability to deal with theory. It is easily understood that the primary cause of mental troubles lies in the use of inconsistent and contrary ways of performing. In almost all cases the person suffering the difficulty is torn between two potent theoretical concepts which are bidding for his acceptance. He may not understand exactly what these theories are, but they represent ways of behaving, and as he comes to recognize more and more clearly the inconsistencies in these ways of behaving, they play havoc with his mental stability.

It is in dealing with these theoretical concepts that the Competency Pattern can be of the greatest service. To the average cultured person, theory is an impractical kind of daydreaming. This unfortunate attitude is largely the fault of the philosophers, who insisted upon taking theory out of the realm of practicality, where it originated and where it belongs, and placing it in an "untouchable" world all its own. But since criticism is not our present concern, suffice it to say that the lack of a well-developed theory forces the average individual to resort to expediency and "playing by ear." So doing, he is almost certain to get himself into inconsistent behaviors, and if he is sensitive this inconsistency will certainly set up abnormal tensions tending toward an unhealthy mental condition.

The Competency Pattern forces a clarification of the use of theory and demonstrates the eminent practicality of theory as applied to everyday affairs. As discussed in the section on personal development, when the individual becomes actively engaged in making himself an adequate set of theoretical principles and assumptions to serve as guidelines for his behavior, and begins to apply this theory to *all* of his activities, he will certainly become a better adjusted person.

THE COMPETENCY PATTERN AND THE DIVISION OF LABOR

Lest this preoccupation with theory be misunderstood and the thought arise that the Competency Pattern is useful *only* in working with theoretical constructs, this section will deal with an entirely different service. Our discussion will be built upon the Competency Pattern notion of "tasks" and how each person will be obligated to perform a minimum number of these tasks, depending of course upon his ability, training, and other factors.

As the Competency Pattern is used to examine each of the areas of work of a society, and to divide and categorize this work into various kinds of tasks, it becomes evident that it may also be appropriately used to divide the labor among the members of the group. Each task will be assayed in terms of what is to be done, why it is needed in this situation, who is to do it, and what equipment he should have. This is an important device in industry for dividing the work of production and obviously it has already been used to a certain extent in setting up production lines. The same sort of possibilities exist for dividing the overall work of the social group among various persons and institutions. This also has been done before, but never in an adequate fashion, and there are always tasks which seem to go unperformed because no one understands that he is responsible for the performance, or an institution is not functioning properly, or for some other reason. Witness, for example, the efforts put forth by the schools to nourish the children when actually the school is an institution designed to carry on the educational work of society. Witness, too, the present concern with the moral values of the society and the great confusion as to whether these values are to be furthered by the home, the church, the schools, or some other separate and specialized institution.

At present the division of labor is not adequately carried out. The Competency Pattern offers a way to ascertain just what the tasks are and to help show who should do what task in order to further the work of the community institutions. Naturally, if this purpose is accomplished, the result will be more coöperation and more efficiency as each person understands more clearly what his tasks are, why they are his, and what will happen if he does not properly do his part.

THE COMPETENCY PATTERN USED TO ORGANIZE TRAINING PROGRAMS

Chapter 15 demonstrated that the Competency Pattern is a very useful tool to be employed in discovering the elements for a training program and in properly organizing it. The area under discussion there was educational administration and supervision, but we now know that the Competency Pattern is equally applicable to other kinds of training programs. It has all the advantages of the job analysis plus the additional feature of providing guidelines in the form of theory. Thus, no matter how simple the training program is, it can still make use of the Competency Pattern notion because the latter is concerned with the two most important elements of any "doing" job, namely, the tasks to be performed and the know-how necessary for the performance. As the job becomes more complicated, tends toward a professional activity, the Competency Pattern continues to function effectively because it can then apply the social and scientific theories which underlie this profession.

For example, the Competency Pattern seems a natural tool to apply to one of the most pressing problems in the whole area of teacher preparation: what kind of evaluation activity will prove an adequate basis for giving teachers certificates, or for renewing and upgrading certificates. As is well known, the certification of teachers is at present almost entirely a matter of the accumulation of a certain number of college credits. Obviously, this is not the most efficient way to provide certification. The Competency Pattern makes possible a better assessment of the things the teacher needs to be able to do to receive a certificate, and also suggests ways and means for evaluating adequate performance of these tasks.

Thus the high-sounding but usually vague objectives of the training program can be made concrete. The trainee will have a much more definite goal toward which to work when his learning objectives are not stated in some such vague terms as "to become a master teacher" but instead consist of the various tasks which he needs to do in order to reach this desired status of competence. As this wider understanding is achieved it seems assured that there will be more learners engaged in more purposeful and efficient learning than has heretofore been the case.

THE COMPETENCY PATTERN USED TO SELECT AND UPGRADE PERSONNEL

In all kinds of modern activities the selection and retention of adequate personnel is a primary problem. The complicated nature of a modern society makes it increasingly important that people be selected who have the proper qualifications and the necessary capabilities for learning. Further, these people must receive adequate training and be upgraded as rapidly as they acquire the needed competence. Many haphazard devices have been used to achieve this purpose. None of them have worked very well, presumably in large part because of the lack of an adequate way of dealing with the needed competences. That is, people were selected in terms of personality traits, educational background, manipulative tests, IQ and other performance tests, and so on. These devices do select; however, they choose people with the highest all-round mental and physical qualities, without regard for selection to fit a particular job. A student applying for entrance into a college of medicine, for example, will not be admitted unless he has a certain grade level in college and unless he has passed certain courses in chemistry. It has been shown that these qualifications do not mean that the student knows a lot of chemistry when he enters the medical school or that he is primarily suited to become a medical man. The courses have simply selected out people who are of a high caliber intellectually speaking, and who have great capabilities or possibilities along those lines.

Such selecting devices are all right and work quite well when there is a surplus of population and no great demand for highly intelligent people. However, modern society is characterized by an always increasing demand for this type of people and there are simply not enough to go around. This means that educational programs are going to have to be more specific in selecting personnel for particular jobs; they must do more than choose the highly intelligent members. At present most of our selection devices pick out people who would make good in almost any kind of endeavor. They could be good lawyers, good doctors, good businessmen, good teachers, good anything. If education is to live up to its promises it must be able to choose more effectively those people who have lesser native abilities and must fit them into the jobs they can do best. Further, it must give them the training and educational experiences which will prepare them for the job.

This is where the Competency Pattern comes into the picture as a service aid. When selection is made on the basis of traits it is no real selection. However, when selection is made on the basis of the performance of specific tasks, such as will be the case under the

Competency Pattern, a much more specific kind of evaluation is possible. Suppose an engineering firm develops an evaluative instrument for selecting a fine all-round engineer to oversee all the operations of the firm, but applies it to the selection of all its employees. Obviously the job of engineer calls for a person of high-class mental ability who can intelligently evaluate the activities of the company and make sensible judgments about its operations. This is well and good. However, a great many other people will be functioning for the firm, doing a multitude of important tasks but tasks which do not require such a high level of intellectualization. Not only is it a waste of important human resources to have a person capable of a high degree of intellectualization in each of these minor tasks but it also keeps out of the picture those who could adequately do the tasks but who do not possess the intellectualizing abilities which are required to be selected for the job.

The upshot of the matter is, therefore, that the Competency Pattern by using its idea of tasks can better describe just what a particular person is to do as he works at his job. When it is known what he will do and the skills he will need, it is much easier to select someone who will adequately fill the job. Further, under this sort of system it will be much easier to assign the easier tasks to beginners and the more difficult tasks to advanced workers. Thus the business of upgrading personnel will be simplified and brought under control. As was mentioned in the section on training programs, it will be possible to train people more nearly to the job level of their native abilities. The greater the percentage of the population engaged in working at the upper level of their native ability, and with the best possible training, the more efficient use will be made of the human resources of the society. More people will then have work which challenges their capabilities. To be sure, this is no small assignment and will require the application of the Competency Pattern to all the different areas of work. It will then be possible to separate out the tasks and their related skills and knowledges which will be appropriate to each job. Only upon some such basis can a logical training program be organized which will prepare people for performing these tasks and will improve their capabilities so that they can take on more advanced productive tasks.

THE COMPETENCY PATTERN USED TO IMPROVE GENERAL APPLICATION OF PHILOSOPHICAL NOTIONS

A general consideration of the broad human needs indicates that the use of philosophical notions is not as prevalent as their importance warrants. There are two reasons for this lack. First, some of the more formal philosophies have withdrawn from common human experience and have built themselves little worlds separate and apart wherein their tenets are indeed eternal truths. Because these ideas were never adequately applied to raw experience for testing they got out of touch with the ordinary intelligent citizen and his daily struggle with real problems. Thus philosophy became known as a sort of "long-hair" interest without much practical consequence. Second, in an autocratic society most of the people are doing the execution part of the tasks and only a few are engaged in planning. Since philosophical theories are so bound up with the planning phase it is evident that in an autocratic organization the theorizing will be done by a few and the carrying out of the theories by the many. Therefore only the few will need to be familiar with theory.

In a democratic society the situation is different. All the people are expected to participate in the planning activities and all planning must make use of philosophical theories. Thus, as the planning is no longer done by a few, the theorizing also is no longer to be left to a few but must be part of the thinking of each member. In addition, the speed with which modern societies move makes it imperative that philosophical theories be rapidly tested and just as rapidly revised and reconstructed so as to keep pace with the ever recurring changes in modern living. In a more leisurely day it mattered little if a group of "thinkers" wanted to philosophize for an extended period of time regarding some eternal facts which were above and beyond the problems of this world. However, nowadays this is not a very logical or even safe occupation. The world may move on and leave the "philosopher" behind. The need is for more people to be using philosophy—theorizing about the things they do—and working out with others general theoretical agreements regarding the social bases upon which they will operate.

Because of its inclusion of theoretical elements, the Competency Pattern makes a fine tool to use in improving the breadth of usage of theoretical concepts. As was pointed out in the section on personal development, each individual needs to state rather clearly some of his theoretical values so as to proceed with developing his own capabilities. With each member of the group engaged in this kind of activity there will undoubtedly be a great amount of exchange of ideas so that the common understanding of philosophical assumptions will become more prevalent. There will also be disagreements as to the meaning and validity of many of these assumptions. At this point the latter must be returned to experience so as to gain a more comprehensive definition and meaning and so as to be tested for their real validity when applied to the everyday conduct of human affairs.

THE COMPETENCY PATTERN AS A DEVICE TO IMPROVE THE USE OF THE METHOD OF REFLECTIVE THINKING

Another broad social need seems to be a more thorough application of the method of reflective thinking. The idea is widely accepted that the method of reflective thinking (the scientific method) is the most effective way yet discovered to deal with problems. In the past two centuries it has produced more usable and functional knowledge than man has accumulated in all of the thousand centuries he has been in existence. Thus if performance means anything the method of reflective thinking has completely demonstrated its worth.

There continues, nevertheless, to be some confusion as to the applicability of this method to all types of human problems. Several schools of thought accord the method various places and differ on whether it is of universal worth or has only limited areas of effectiveness. Suffice it to say that the method has proved itself in many areas of human work and is worthy of a fair trial in all areas.

The Competency Pattern is the means whereby the scientific method can be used more extensively and applied to a variety of situations. It will be recalled that the pattern makes use of the best available facts. Since the method of reflective thinking is the best producer of facts, this method will work very closely with the application of the Competency Pattern.

It has been said that science without philosophy is blind. It has also been said that philosophy without science is meaningless. This simply indicates the need for an adequate application of both science and philosophy. Here the Competency Pattern can render a decided service because it is, in simple actuality, a device designed to integrate these two elements. First, it takes its guidelines from the area of philosophy. Second, it takes its facts from investigations which have been carried on in the spirit of the method of reflective thinking. Third, it requires that the facts and the theory be each separately, and both in combination, applied to actual productive experience so as to receive the best kind of testing.

SUMMARY

The Competency Pattern is, by and large, a tool designed to make theoretical notions and practical experience complement each other and to facilitate the solving of everyday human problems. It can make real a lot of so-called theoretical expressions which we have used freely but which have never actually meant much. For example, people are always receiving admonitions "to think," "to be intelligent," "to be a good citizen," "to be an educated person." These words mean nothing unless they are put into an experiential background. "Think" is a silly command unless one is shown what he must do to be a thinking being. The Competency Pattern reduces all these notions to definite behavioral terms. At the same time, it escapes the stigma of being purely prescription advice because it allows each person the privilege of setting up his own beliefs and his own methods and skills consonant with those beliefs.

In this chapter, several uses for the Competency Pattern have been discussed. Also suggestions have been given as to the outcomes which may be expected if the device is seriously applied to each of these particular problems. Some of the suggested applications and predicted outcomes were as follows:

1. Used as a personal development guide.
2. Will result in more educated and cultured people.

1. Used for the division of labor in industry, business, and society.
2. Will result in more effective coöperation and more efficient work.

1. Used as a mental health technique.
2. Will result in more well-adjusted and happy people.

1. Used to organize training programs of all types.
2. Will result in more purposeful and efficient learning.

1. Used to improve reflective thinking.
2. Will result in more people engaged more effectively in making plans and solving problems.

1. Used to select and upgrade personnel.
2. Will result in more people in jobs that utilize their capabilities and challenge their possibilities.

1. Used to make theory and philosophy the important factors they logically should be.
2. Will result in more intelligent action.

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